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Water Resources Data for New Hampshire and Vermont, Water Year 1980

(U.S.) Geological Survey
Boston, MA

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National Technical Information Service
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Water Resources Data for New Hampshire and Vermont

U.S. GEOLOGICAL SURVEY WATER-DATA REPORT NH-VT-80-1

WATER YEAR 1980

Prepared in cooperation with the States of New Hampshire
and Vermont and with other agencies

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INFORMATION SERVICE
U.S. DEPARTMENT OF COMMERCE
SPRINGFIELD, VA 22161

CALENDAR FOR WATER YEAR 1980

1979

OCTOBER

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

NOVEMBER

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
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18	19	20	21	22	23	24
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DECEMBER

S	M	T	W	T	F	S
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9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

1980

JANUARY

S	M	T	W	T	F	S
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13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

FEBRUARY

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					1	2
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10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	

MARCH

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						1
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23	24	25	26	27	28	29
30	31					

APRIL

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13	14	15	16	17	18	19
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27	28	29	30			

MAY

S	M	T	W	T	F	S
				1	2	3
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25	26	27	28	29	30	31

JUNE

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15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

JULY

S	M	T	W	T	F	S
		1	2	3	4	5
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13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

AUGUST

S	M	T	W	T	F	S
					1	2
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10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

SEPTEMBER

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

U.S. DEPARTMENT OF THE INTERIOR
March 3, 1849

SEAL OF THE STATE OF NEW HAMPSHIRE
1776

Water Resources Data for New Hampshire and Vermont

U.S. GEOLOGICAL SURVEY WATER-DATA REPORT NH-VT-80-1

WATER YEAR 1980

Prepared in cooperation with the States of New Hampshire and Vermont and with other agencies

UNITED STATES DEPARTMENT OF THE INTERIOR

JAMES G. WATT, Secretary

GEOLOGICAL SURVEY

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16. Abstract

Water-resources data for the 1980 water year for New Hampshire and Vermont consist of records of stage, discharge, and water quality of streams; stage and contents of lakes and reservoirs; and water levels and water quality of wells. This report contains discharge records for 77 gaging stations, stage records for 3 lakes, monthend contents for 25 lakes and reservoirs, water-quality data for 4 gaging stations, and water levels for 40 observation wells. Also included are data for 4 crest-stage partial-record stations. Additional water data were collected at various sites, not part of the systematic data-collection program, and are published as miscellaneous measurements. A few pertinent stations (not included above) in bordering States and Province of Quebec are also included in this report. These data represent that portion of the National Water Data System operated by the U.S. Geological Survey and cooperating State and Federal agencies in New Hampshire and Vermont.

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PREFACE

This report was prepared by personnel of the New England District of the Water Resources Division of the U. S. Geological Survey in cooperation with the States of New Hampshire and Vermont, and with other agencies. District personnel directly responsible for the collection, evaluation, and compilation of the data contained herein are: F. E. Blackey, M. F. Coakley, J. E. Cotton, N. E. Kelso, J. E. King, K. E. McKenna, S. C. Shore, K. B. Smith, and K. W. Toppin. This report is one of a series issued by State.

CONTENTS

Page
Preface III
List of stations, in downstream order,
  for which records are published VI
Introduction 1
Cooperation 1
Hydrologic conditions 3
Definition of terms 3
Downstream order and station number 10
Numbering system for wells and miscellaneous sites 10
Special networks and programs 10
Explanation of stage and water-discharge records 11
  Collection and computation of data 11
  Accuracy of field data and computed results 12
  Other data available 13
Explanation of water-quality records 13
  Collection and examination of data 13
  Water analysis 13
  Water temperature 13
  Sediment 13
Explanation of ground-water-level records 13
  Collection of data 13
Publications on techniques of water-resources investigations 14
Gaging station records 15
  Discharge at partial-record stations and miscellaneous sites 148
    Crest-stage partial-record stations 148
    Discharge measurements at miscellaneous sites 149
    Miscellaneous temperature and specific conductance measurements 150
Ground-water records 161
  Ground-water levels, by county 161
  Ground-water levels in New Hampshire 162
  Ground-water levels in Vermont 170
Index 175

ILLUSTRATIONS

Page
Figure 1. Map showing location of data-collection sites 2
2. Comparison of discharge at two long-term index gaging stations during 1980 water year with median discharge for period 1941-70 4
3. System for numbering wells and miscellaneous sites 10

TABLES

Factors for converting inch-pound units to International System Units (SI) ....inside back cover

SURFACE-WATER AND WATER-QUALITY STATIONS, IN DOWNSTREAM ORDER, FOR WHICH RECORDS ARE PUBLISHED

(Letters after station name designate type of data:
(d), discharge; (l), lake; (c) chemical; (b), biological; (t), water temperature)

NORTH ATLANTIC SLOPE BASINS

ANDROSCOGGIN RIVER BASIN

- Androscoggin River:
- Umbagog Lake:
  - Magalloway River: Page
    - Diamond River near Wentworth Location, NH (d) ... 15
- Androscoggin River at Errol, NH (d) ... 16
- Androscoggin River near Gorham, NH (d) ... 17

SACO RIVER BASIN

- Saco River:
  - Ellis River near Jackson, NH (d) ... 18
  - Lucy Brook near North Conway, NH (d) ... 19
- Saco River near Conway, NH (d) ... 20
  - Ossipee River at Effingham Falls, NH (d) ... 21

PISCATAQUA RIVER BASIN

- Salmon Falls River (head of Piscataqua River) at Milton, NH (d) ... 22
- Piscataqua River:
  - Oyster River near Durham, NH (d) ... 23
  - Lamprey River near Newmarket, NH (d) ... 24
  - Squamscott River:
    - Little River:
      - Dudley Brook near Exeter, NH (d) ... 25

MERRIMACK RIVER BASIN

- Pemigewasset River (head of Merrimack River):
  - Baker River:
    - Stevens Brook near Wentworth, NH (d) ... 26
- Pemigewasset River at Plymouth, NH (d) ... 27
  - Squam River at Ashland, NH (d) ... 28
  - Smith River near Bristol, NH (d) ... 29
  - Lake Winnipesaukee:
    - Poor Farm Brook near Gilford, NH (d) ... 30
  - Lake Winnipesaukee at Weirs Beach, NH (l) ... 31
  - Lake Winnipesaukee Outlet at Lakeport, NH (d) ... 32
  - Winnipesaukee River at Tilton, NH (d) ... 33
- Merrimack River:
  - Contoocook River:
    - Nubanusit Brook near Peterborough, NH (d) ... 34
  - Contoocook River below Hopkinton Dam, at West Hopkinton, NH (d) ... 35
    - West Branch Warner River near Bradford, NH (d) ... 36
    - Blackwater River near Webster, NH (d) ... 37
- Merrimack River at Concord, NH (cbt) ... 38
  - Soucook River near Concord, NH (d) ... 46
  - Piscataquog River below Everett Dam, near East Weare, NH (d) ... 47
- Merrimack River near Goffs Falls, below Manchester, NH (d) ... 48
  - Souhegan River:
    - Stony Brook:
      - Stony Brook tributary near Temple, NH (d) ... 49
  - Nashua River at Nashua, NH (c) ... 50
- Merrimack River at Nashua, NH (c) ... 52
- Reservoirs in Merrimack River basin ... 54

CONNECTICUT RIVER BASIN

- Connecticut River:
  - Big Brook near Pittsburg, NH (d) ... 55
- Connecticut River at First Connecticut Lake, near Pittsburg, NH (d) ... 56
- Connecticut River below Indian Stream, near Pittsburg, NH (d) ... 57
  - Halls Stream near East Hereford, Quebec (d) ... 58
- Connecticut River at North Stratford, NH (d) ... 59
  - Upper Ammonoosuc River near Groveton, NH (d) ... 60
- Connecticut River near Dalton, NH (d) ... 61
  - Passumpsic River:
    - Moose River at Victory, VT (d) ... 62
    - Moose River at St. Johnsbury, VT (d) ... 63
  - Passumpsic River at Passumpsic, VT (d) ... 64
  - Ammonoosuc River at Bethlehem Junction, NH (d) ... 65
  - Ammonoosuc River near Bath, NH (d) ... 66
- Connecticut River at Wells River, VT (dcbt) ... 67
  - Wells River at Wells River, VT (d) ... 77
  - Waits River:
    - East Orange Branch at East Orange, VT (d) ... 78
  - Ompompanoosuc River at Union Village, VT (d) ... 79
  - Mink Brook near Etna, NH (d) ... 80
  - White River:
    - Third Branch White River:
      - Ayers Brook at Randolph, VT (d) ... 81
      - White River at West Hartford, VT (d) ... 82

NORTH ATLANTIC SLOPE BASINS--Continued
CONNECTICUT RIVER BASIN--Continued

Page
Connecticut River at West Lebanon, NH (d) 83
Mascoma River at Mascoma, NH (d) 84
Ottauquechee River at North Hartland, VT (d) 85
Sugar River at West Claremont, NH (d) 86
Black River at Covered Bridge at Weathersfield, VT (d) 87
Black River at North Springfield, VT (d) 88
Williams River at Brockways Mills, VT (d) 89
Saxtons River at Saxtons River, VT (d) 90
Connecticut River at North Walpole, NH (d) 91
Connecticut River at Walpole, NH (cbt) 92
West River at Jamaica, VT (d) 103
West River at Newfane, VT (d) 104
Ashuelot River near Gilsum, NH (d) 105
Ashuelot River below Surry Mountain Dam, near Keene, NH (d) 106
Otter Brook (head of The Branch) below Otter Brook Dam, near Keene, NH (d) 107
Ashuelot River at Hinsdale, NH (d) 108
Reservoirs in Connecticut River basin 109

HUDSON RIVER BASIN

Hudson River:
Batten Kill at Arlington, VT (d) 110
Hoosic River:
Walloomsac River near North Bennington, VT (d) 111

ST. LAWRENCE RIVER BASIN

St. Lawrence River:
Lake Champlain (head of Richelieu River):
Poultney River below Fair Haven, VT (d) 112
Otter Creek at Center Rutland, VT (d) 113
Otter Creek at Middlebury, VT (d) 114
Winooski River:
Stevens Branch:
Jail Branch at East Barre, VT (d) 115
North Branch Winooski River at Wrightsville, VT (d) 116
Reservoirs in Winooski River basin above Montpelier, VT 117
Winooski River at Montpelier, VT (d) 118
Dog River at Northfield Falls, VT (d) 119
Mad River near Moretown, VT (d) 120
Waterbury Reservoir (head of Little River) near Waterbury, VT (l) 121
Little River near Waterbury, VT (d) 122
Winooski River near Essex Junction, VT (d) 123
Lamoille River at Johnson, VT (d) 124
Lamoille River at East Georgia, VT (d) 125
Missisquoi River near North Troy, VT (d) 126
Missisquoi River near East Berkshire, VT (d) 127
Lake Champlain at Burlington, VT (l) 128
Richelieu River (Lake Champlain) at Rouses Point, NY (lcb) 129
St. Francis River:
Lake Memphremagog (head of Magog River) at Newport, VT (l) 136
Black River at Coventry, VT (dcbt) 137
Barton River:
Clyde River at Newport, VT (d) 147

WATER RESOURCES DATA FOR NEW HAMPSHIRE AND VERMONT, 1980

INTRODUCTION

Water-resources data for the 1980 water year for New Hampshire and Vermont consist of records of stage, discharge, and water quality of streams; stage and contents of lakes and reservoirs; and water levels and water quality of wells. This report contains discharge records for 77 gaging stations, stage records for 3 lakes, monthend contents for 25 lakes and reservoirs, water-quality data for 4 gaging stations, and water levels for 40 observation wells. Also included are data for 4 crest-stage partial-record stations. Additional water data were collected at various sites, not part of the systematic data-collection program, and are published as miscellaneous measurements. Locations of gaging stations, partial-record stations, and observation wells are shown in figure 1. A few pertinent stations (not included above) in bordering States and Province of Quebec are also included in this report. These data represent that portion of the National Water Data System collected by the U.S. Geological Survey and cooperating State and Federal agencies in New Hampshire and Vermont.

Records of discharge or stage of streams, and contents or stage of lakes and reservoirs were first published in a series of U.S. Geological Survey water-supply papers entitled, "Surface water supply of the United States." Through September 30, 1960, these water-supply papers were in an annual series and then in a 5-year series for 1961-65 and 1966-70. Records of chemical quality, water temperatures, and suspended sediment were published from 1941 to 1970 in an annual series of water-supply papers entitled, "Quality of surface waters of the United States." Records of ground-water levels were published from 1939 to 1974 in a series of water-supply papers entitled, "Ground-water levels in the United States." Water-supply papers may be consulted in libraries of the principal cities of the United States or may be purchased from Branch of Distribution, U.S. Geological Survey, 1200 South Eads Street, Arlington, VA 22202.

For water years 1961 through 1974, streamflow data were released by the Geological Survey in annual reports on a State-boundary basis. Water-quality records for water years 1964 through 1974 were similarly released either in separate reports or in conjunction with streamflow records. Beginning with the 1975 water year, water data for streamflow, water quality, and ground water are published as an official Survey report on a State-boundary basis. These official Survey reports carry an identification number consisting of the two-letter State abbreviation, the last two digits of the water year, and the volume number. For example, this report is identified as "U.S. Geological Survey water-data report NH-VT-80-1." Water-data reports are for sale by the National Technical Information Service, U.S. Department of Commerce, 5285 Port Royal Road, Springfield, VA 22161.

COOPERATION

Organizations that assisted in collecting data through cooperative agreements with the Geological Survey in 1980 are:

New Hampshire: State Water Resources Board, G. M. McGee, Sr., chairman.

Vermont: State Department of Water Resources, R. A. LaRosa, acting commisioner, succeeded by J. R. Ponsetto, commisioner; town of Springfield, M. J. Valuk, town manager.

Assistance in the form of funds or services was given by the Corps of Engineers, U.S. Army, in collecting records for 43 gaging stations, and by the U.S. Environmental Protection Agency, for 2 water-quality stations published in this report.

Organizations supplying data are acknowledged in the station descriptions.

On waters adjacent to the international boundary, certain gaging stations are maintained by the United States (or Canada) under agreement with Canada (or the United States), and the records are obtained and compiled in a manner equally acceptable to both countries. These stations are designated as "international gaging stations."

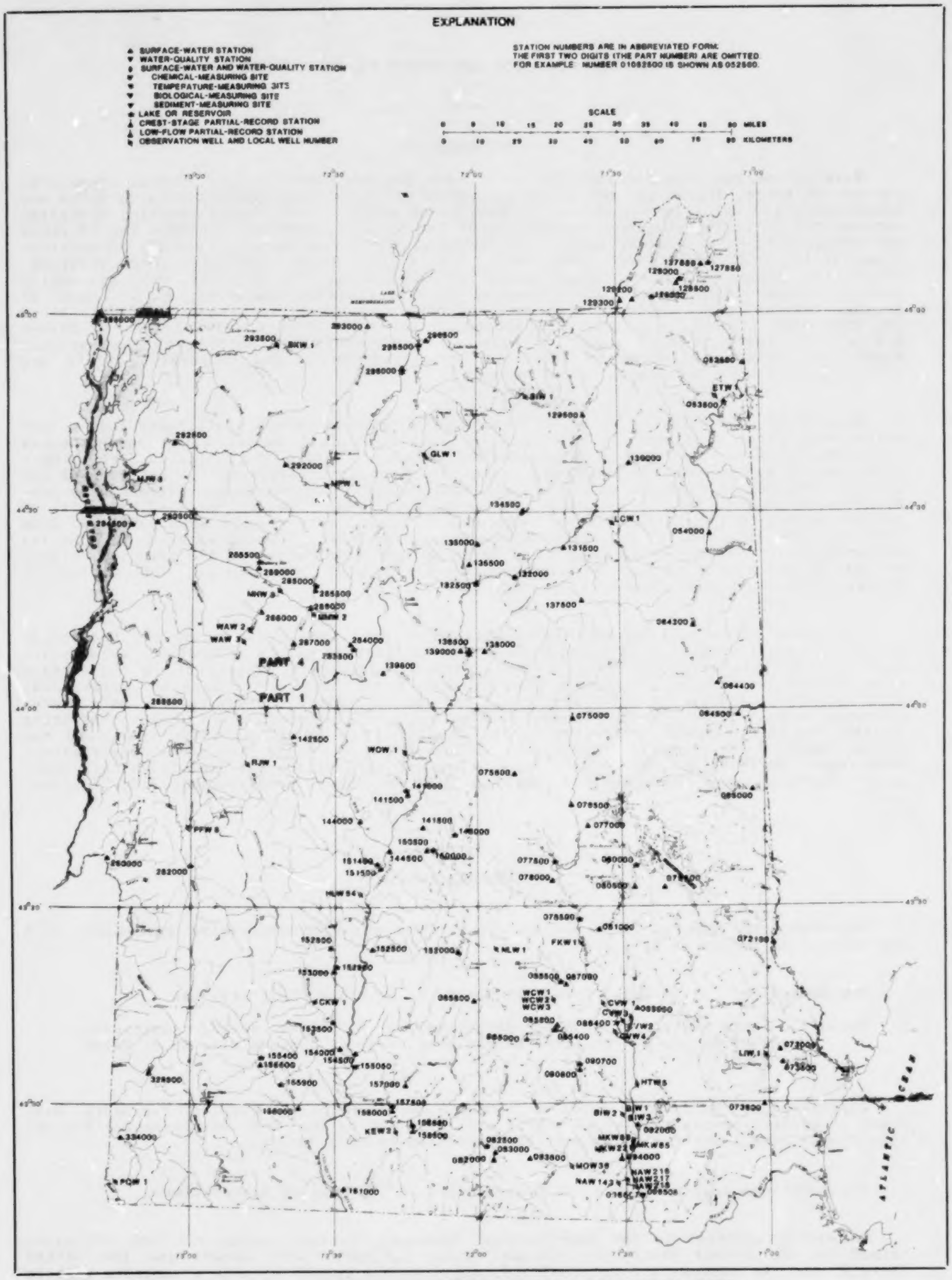
EXPLANATION
▲ SURFACE-WATER STATION
▼ WATER-QUALITY STATION
◆ SURFACE-WATER AND WATER-QUALITY STATION
▼ CHEMICAL-MEASURING SITE
▼ TEMPERATURE-MEASURING SITE
▼ BIOLOGICAL-MEASURING SITE
▼ SEDIMENT-MEASURING SITE
● LAKE OR RESERVOIR
▲ CREST-STAGE PARTIAL-RECORD STATION
▲ LOW-FLOW PARTIAL-RECORD STATION
● OBSERVATION WELL AND LOCAL WELL NUMBER
STATION NUMBERS ARE IN ABBREVIATED FORM.
THE FIRST TWO DIGITS (THE PART NUMBER) ARE OMITTED.
FOR EXAMPLE: NUMBER 01052500 IS SHOWN AS 052500.
SCALE
0 5 10 15 20 25 30 35 40 45 50 MILES
0 10 20 30 40 50 60 70 80 KILOMETERS
73°00
72°30
72°00
71°30
71°00
45°00
44°30
44°00
43°30
43°00
LAKE MEMPHREMAGOG
PART 4
PART 1
ATLANTIC OCEAN
127880
127850
129000
128500
129200
129300
128800
295000
293500
BKW 1
293000
296500
295500
296000
052600
ETW 1
053500
BIW 1
129500
292500
GLW 1
292000
MPW 1
130000
MJW 3
134500
294500
292500
LCW 1
054000
135000
131500
285500
136500
289000
132000
285000
132500
MNW 5
285500
137500
288000
MNW 2
064200
WAW 2
286000
WAW 3
287000
284000
138500
138000
139000
283500
139500
064400
288500
075000
064500
142500
WOW 1
RJW 1
075800
141000
141500
076500
065000
144000
141800
145000
077000
PFW 5
150500
150000
151400
144500
077500
080000
151500
078000
080500
079500
283000
282000
HLW 54
078500
081000
152800
152500
152000
FKW 1
NLW 1
072100
152900
153000
085500
087000
WCW 1
WCW 2
WCW 3
085800
CVW 1
CVW 3
088000
CKW 1
153500
086000
088400
CVW 2
086400
CVW 4
155400
156600
154000
154500
155050
086000
090700
LIW 1
073000
073500
090600
HTW 5
155900
157000
328500
157500
158000
073800
156000
BIW 1
BIW 2
BIW 3
KEW 2
158680
158500
092000
334000
082500
083000
083800
082000
MKW 85
MKW 22
MKW 85
094000
MOW 38
NAW 215
NAW 143
NAW 217
NAW 218
095500
POW 1
161000

FIGURE 1. LOCATION OF DATA-COLLECTION SITES

HYDROLOGIC CONDITIONS

At the beginning of the water year, runoff was excessive except for a small area in southeastern New Hampshire where it was in the normal range.

Runoff was excessive through October except for northern Vermont where it was in the normal range. The third highest monthly runoff for October for the period of record occurred at index station, Lamprey River at Newmarket, NH (July 1934-).

During the period November through January, runoff declined to the normal range except for southern New Hampshire that was excessive in November and a small area in southwestern Vermonth that was deficient in January.

In February below normal precipitation resulted in deficient runoff in both states.

A combination of warm temperatures, snow melt, and rainfall produced normal runoff in March except for a small area in southeastern New Hampshire that was deficient. Spring peak flows were moderate and only the usual lowland flooding occurred.

Runoff was generally in deficient range during April through August. However, runoff was in the normal range in central and southern New Hampshire and southern Vermont in April and in central Vermont and southern New Hampshire in May. Runoff was also normal in the central and northern part of both States in July and in the southern part of both States in August.

In September runoff was normal except in northwestern Vermont and southeastern New Hampshire where it was deficient.

Runoff for both the water year and the period April to September was deficient in Vermont and northern and central New Hampshire and in the normal range in southeastern New Hampshire.

Figure 2, for which records of two long-term gaging stations were used, shows a comparison of the monthly and yearly mean discharge for the 1980 water year with the medium discharge for the period 1941-70.

During the 1980 water year, ground-water levels in the states of New Hampshire and Vermont fluctuated as follows:

New Hampshire: At the beginning of the water year, ground-water levels ranged from below normal in the northern part of New Hampshire to above normal in the southern part. These conditions continued into December. By the end of January, water levels were generally in the normal range except in southeastern and southwestern parts of the State where levels were below normal. By the end of February, water levels were in the below-normal range throughout the State.

Spring recharge during March and April resulted in normal water levels in the southern half of the State by the end of April, but levels remained below normal in the northern half.

Seasonal water-level declines occurred throughout the State from May until the end of September. Water levels were generally in the below-normal range during this period except in the southern border townships where normal levels were recorded from the end of July through September.

Vermont: At the beginning of the water year, ground-water levels were in the normal range in the northern half of the State and in the above-normal range in the southern half. While water levels were still above normal in southwestern Vermont in November, levels generally were normal elsewhere. During December and January water levels were generally in the normal range although scattered areas were in the below-normal range. By the end of February, water levels were in the below-normal range throughout the State.

Spring recharge during March and April resulted in normal water levels in the southern half of the State during April, but levels generally remained below normal in the northern half.

Seasonal water-level declines occurred throughout the State from May through August. Water levels were generally in the below-normal range during this period except in southwestern Vermont where normal levels were recorded in July and August. Recharge during September in southern and western parts of the State resulted in normal water levels in these areas at the end of the water year.

DEFINITION OF TERMS

Terms related to streamflow, water-quality, and other hydrologic data, as used in this report, are defined on the following pages. See also the table for converting inch-pound units to International System of Units (SI) on the inside of the back cover.

Algae are mostly aquatic single-celled, colonial, or multicelled plants, containing chlorophyll and lacking roots, stems, and leaves.

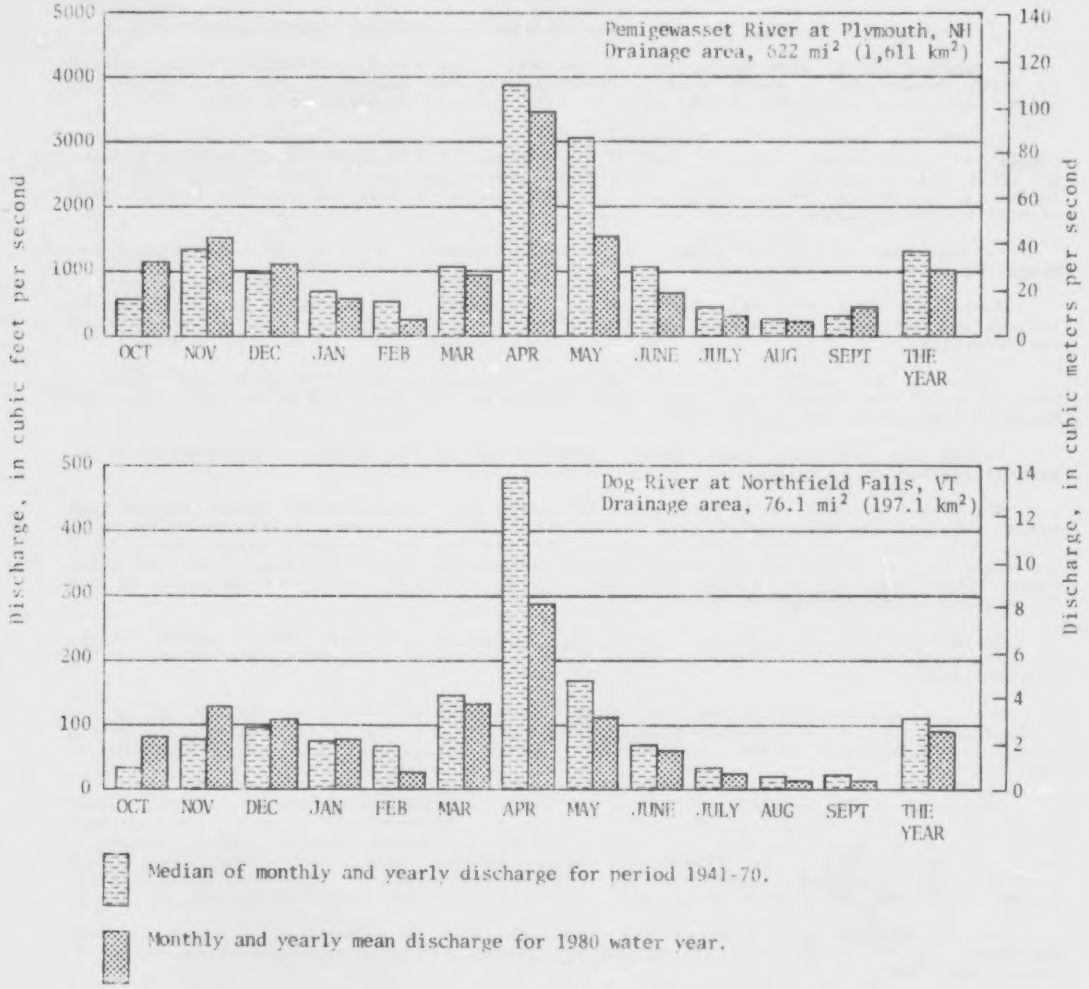

Figure 2.--Comparison of discharge at two long-term index gaging stations during 1980 water year with median discharge for period 1941-70.

Aquifer is a geologic formation, group of formations, or part of a formation that contains sufficient saturated permeable material to yield significant quantities of water to wells or springs.

Artesian means confined and is used to describe a well in which the water level stands above the top of the aquifer, tapped by the well. A flowing artesian well is one in which the water level is above the land surface.

Bacteria are microscopic unicellular organisms, spherical, rod-like, or spiral and threadlike in shape, often clumped into colonies. Some bacteria cause disease, others perform an essential role in nature in the recycling of materials; for example, by decomposing organic matter into a form available for reuse by plants.

Total coliform bacteria are a particular group of bacteria used as indicators of possible sewage pollution. They are characterized as aerobic or facultative anaerobic, gram-negative, nonspore-forming, rod-shaped bacteria which ferment lactose with gas formation within 48 hours at 35°C. These bacteria are defined as organisms which produce colonies with a golden-green metallic sheen within 24 hours when incubated at 35°C ±1.0°C on M-Endo medium (nutrient medium for bacterial growth). Concentrations are expressed as number of colonies per 100 mL (milliliters) of sample.

Fecal coliform bacteria are bacteria that are present in the intestines or feces of warmblooded animals. They are often used as indicators of the sanitary quality of water. These bacteria are defined as all organisms which produce blue colonies within 24 hours when incubated at 44.5°C ±0.2°C on M-FC medium (nutrient medium for bacterial growth). Concentrations are expressed as number of colonies per 100 mL of sample.

Fecal streptococcal bacteria are bacteria found in the intestines of warmblooded animals. Their presence in water is considered to verify fecal pollution. They are characterized as gram-positive, cocci bacteria which are capable of growth in brain-heart infusion broth. These bacteria are defined as all organisms which produce red or pink colonies within 48 hours at 35°C ±1.0°C on KF Streptococcus agar (nutrient medium for bacterial growth). Concentrations are expressed as number of colonies per 100 mL of sample.

Bed material is the unconsolidated material of which the bottom of a stream, lake, pond, reservoir, or estuary is composed.

Biochemical oxygen demand (BOD) is a measure of the quantity of dissolved oxygen, in milligrams per liter, used for the decomposition of organic matter by microorganisms, such as bacteria.

Biomass is the amount of living matter present at any given time, expressed as the mass per unit area or volume of habitat.

Ash mass is the mass or amount of residue present after the residue from the dry-mass determination has been ashed in a muffle furnace at a temperature of 500°C for 1 hour. Ash-mass values of zooplankton and phytoplankton are expressed in g/m^3 (grams per cubic meter), and ash-mass values of periphyton and benthic organisms are expressed in g/m^2 (grams per square meter).

Biomass pigment ratio is the ratio of organic mass in mg/m^2 (milligrams per square meter) to the mass of chlorophyll *a*, mg/m^2.

Dry mass refers to the mass of residue present after drying in an oven at 60°C for zooplankton and 105°C for periphyton, until the mass remains unchanged. This mass represents the total organic matter, ash, and sediment in the sample. Dry-mass values are expressed in the same units as ash mass.

Bottom material: See Bed material.

Recoverable from bottom material is the amount of a given constituent in solution after a representative sample of bottom material has been digested by a method (usually using an acid or mixture of acids) that results in dissolution of only readily soluble substances. Complete dissolution of all bottom material is not achieved by digestion treatment and thus determination represents less than the total amount (that is, less than 95 percent) of the constituent in the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Total in bottom material is the total amount of a given constituent in a representative sample of bottom material. This term is used only when analytical procedure assures measurement of at least 95 percent of the constituent determined. Knowledge of the expected form of the constituent in the sample, as well as analytical methodology used, is required to judge when results should be reported as "total in bottom material."

Cells/volume refers to the number of cells of any organism which is counted by using a microscope and grid or counting cell. Many planktonic organisms are multicelled and are counted according to the number of contained cells per sample, usually milliliters (mL) or liters (L).

Cfs-day is the volume of water represented by a flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, about 646,000 gallons, or 2,447 cubic meters.

Chemical oxygen demand (COD) is a measure of the chemically oxidizable material in water, and gives an approximation of the amount of organic and reducing material present.

Chlorophyll refers to the green pigments of plants. Chlorophyll a and b are the most commonly reported green pigments in plants.

Color is expressed in units of the platinum-cobalt scale. A unit of color is produced by one milligram per liter of platinum in the form of the chloroplatinate ion.

Contents is the volume of water in a reservoir or lake. Unless otherwise indicated, volume is computed on the basis of a level pool and does not include bank storage.

Control designates a feature downstream from the gage that determines the stage-discharge relation at the gage. This feature may be a natural constriction of the channel, an artificial structure, or a uniform cross section over a long reach of the channel.

Cubic feet per second per square mile (CFSM) is the average number of cubic feet of water flowing per second from each square mile of area drained, assuming that the runoff is distributed uniformly in time and area.

Cubic foot per second (FT^3/S, ft^3/s) is the rate of discharge representing a volume of 1 cubic foot passing a given point during 1 second and is equivalent to 7.48 gallons per second or 448.8 gallons per minute or 0.2832 cubic meters per second.

Discharge is the volume of water (or more broadly, volume of fluid plus suspended sediment) that passes a given point within a given period of time.

Mean discharge (MEAN) is the arithmetic mean of individual daily mean discharges during a specific period.

Instantaneous discharge is the discharge at a particular instant of time.

Dissolved refers to that material in a representative water sample which passes through a 0.45-micrometer membrane filter. This is a convenient operational definition used by Federal agencies that collect water data. Determinations of "dissolved" constituents are made on subsamples of the filtrate.

Diversity index is a numerical expression of evenness of distribution of aquatic organisms. The formula for diversity index is:

$$\bar{d} = -\sum_{i=1}^{s} \frac{n_i}{n} \log_2 \frac{n_i}{n}$$

Where n_i is the number of individuals per taxon, n is the total number of individuals, and s is the total number of taxa in the sample of the community. Diversity index values range from zero, when all the organisms in the sample are the same, to a positive number, when some or all of the organisms in the sample are different.

Drainage area of a stream at a specific location is that area, measured in a horizontal plane, enclosed by a topographic divide from which direct surface runoff from precipitation normally drains by gravity into the stream above the specified point. Figures of drainage area given herein include all closed basins, or noncontributing areas, within the area unless otherwise noted.

Drainage basin is a part of the surface of the earth that is occupied by a drainage system, which consists of a surface stream or a body of impounded surface water together with all tributary surface streams and bodies of impounded surface water.

Gage height (G.H.) is the water-surface elevation referred to some arbitrary gage datum. Gage height is often used interchangeably with the general term "stage," although gage height is more appropriate when used with a reading on a gage.

Gaging station is a particular site on a stream, canal, lake, or reservoir where systematic observations of hydrologic data are obtained.

Hardness of water is a physical-chemical characteristic that is commonly recognized by the increased quantity of soap required to produce lather. It is attributable to the presence of alkaline earths (principally calcium and magnesium) and is expressed as equivalent calcium carbonate ($CaCO_3$).

Hydrologic unit is a geographic area representing part of all of a surface drainage basin or distinct hydrologic feature as delineated by the Office of Water Data Coordination on the State Hydrologic Unit Maps; each hydrologic unit is identified by an 8-digit number.

Land-surface datum (lsd) is a datum plane that is approximately at land surface at each ground-water observation well.

Measuring point (MP) is a permanent reference point from which the distance to the water surface in a well is measured to obtain the water level.

Methylene blue active substance (MBAS) is a measure of apparent detergents. This determination depends on the formation of a blue color when methylene blue dye reacts with synthetic detergent compounds.

Micrograms per kilogram (UG/KG, ug/kg) is a unit expressing the concentration of a chemical constituent as the mass (micrograms) of the constituent per unit mass (kilogram) of sediment.

Micrograms per liter (UG/L, ug/L) is a unit expressing the concentration of chemical constituents in a sample as the mass (micrograms) of constituent per unit volume (liter) of sample. One thousand micrograms per liter is equivalent to one milligram per liter.

Milligrams per liter (MG/L, mg/L) is a unit for expressing the concentration of chemical constituents in a sample. Milligrams per liter represents the mass of constituent per unit volume of sample. Concentration of suspended sediment also is expressed in milligrams per liter and is based on the mass of sediment per liter of water-sediment mixture.

National Geodetic Vertical Datum of 1929 (NGVD) is a geodetic datum derieved from a general adjustment of the first order level nets of both the United States and Canada. It was formerly called "Sea Level Datum of 1929" or "mean sea level" in this series of reports. Although the datum was derived from the average sea level over a period of many years at 26 tide stations along the Atlantic, Gulf of Mexico, and Pacific Coasts, it does not necessarily represent local mean sea level at any particular place.

Organism count/area refers to the number of organisms enumerated in a sample and adjusted to the number per unit area of habitat, usually square meters (m^2). Periphyton, benthic organisms, and macrophytes are expressed in these terms.

Organisms count/volume refers to the number of organisms enumerated in a sample and adjusted to the number per unit volume, usually in cells per milliliter (mL) or liter (L). Numbers of planktonic organisms are expressed in these terms.

Partial-record station is a particular site where limited streamflow and(or) water-quality data are collected systematically over a period of years for use in hydrologic analyses.

Particle size is the diameter, in millimeters (mm), of suspended sediment or bed material determined by either sieve or sedimentation methods. Sedimentation methods (pipet, bottom-withdrawal tube, visual-accumulation tube) determine fall diameter of particles in either distilled water (chemically dispersed) or in native water (the river water at the time and point of sampling).

Particle-size classification used in this report agrees with recommendations made by the American Geophysical Union Subcommittee on Sediment Terminology. The classification is as follows:

Classification	Size (mm)	Method of analysis
Clay..........	0.00024 - 0.004	Sedimentation.
Silt..........	.004 - .062	Sedimentation.
Sand..........	.062 - 2	Sedimentation or sieve.
Gravel........	2.0 - 64.0	Sieve.

The particle-size distributions given in this report are not necessarily representative of all particles in transport in the stream. Most of the organic material is removed, and the sample is subjected to mechanical and chemical dispersion before analysis in distilled water. Chemical dispersion is not used for native-water analysis.

Periphyton refers to the assemblage of organisms attached to and growing upon submerged surfaces. While primarily consisting of algae, the assemblage may include bacteria, fungi, protozoa, rotifer, and other small organisms.

Pesticides are chemical compounds used to control undesirable plants and animals. The major categories of pesticides include insecticides, miticides, fungicides, herbicides, and rodenticides. Insecticides and herbicides are the two categories reported.

pH is a symbol denoting the negative logarithm (base 10) of the hydrogen ion concentration of a solution; pH values range from 0 to 14--the lower the value, the more acid is the solution; i.e., the more hydrogen ions it contains.

Phytoplankton are the plant part of the plankton communities which exist in standing waters. They are the primary source of food in their aquatic environments, and are commonly known as algae.

Picocurie (PCI, pCi) is one trillionth (1×10^{-12}) of the amount of radioactivity represented by a curie (Ci). A curie is the amount of radioactivity that yields 3.7×10^{10} radioactive disintegrations per second. A picocurie yields 2.22 dpm (disintegrations per minute).

Polychlorinated biphenyls (PCBs) are industrial chemicals that are mixtures of chlorinated biphenyl compounds having various percentages of chlorine. They are similar in structure to organochlorine insecticides.

Runoff in inches (IN, in) shows the depth to which the drainage area would be covered if all the runoff for a given time period were uniformly distributed on it.

Sediment is solid material that originates mostly from disintegrated rocks and is transported by, suspended in, or deposited from water; it includes chemical and biochemical precipitates and decomposed organic material such as humus. The quantity, characteristics, and cause of the occurrence of sediment in streams are influenced by environmental factors. Some major factors are degree of slope, length of slope, soil characteristics, land usage, and quantity and intensity of precipitation.

Suspended sediment is the sediment that at any given time is maintained in suspension by the upward components of turbulent currents or that exists in suspension as a colloid.

Suspended-sediment concentration is the velocity-weighted concentration of suspended sediment in the sampled zone (from the water surface to a point approximately 0.3 ft above the bed) expressed as milligrams of dry sediment per liter of water-sediment mixture (mg/L).

Suspended-sediment discharge (tons/day) is the rate at which dry weight of sediment passes a section of a stream or is the quantity of sediment, as measured by dry weight or by volume, that passes a section in a given time. It is computed by multiplying discharge times mg/L times 0.0027.

Suspended-sediment load is quantity of suspended sediment passing a section in a specified period.

Total sediment discharge (tons/day) is the sum of the suspended-sediment discharge and the bedload discharge. It is the total quantity of sediment, as measured by dry weight or volume, that is discharged during a given time.

Mean concentration is the time-weighted concentration of suspended sediment passing a stream section during a 24-hour day.

Specific conductance is a measure of the ability of a water to conduct an electrical current and is expressed in micromhos per centimeter at 25°C. Specific conductance is related to the type and concentration of ions in solution and can be used for estimating the dissolved-solids content of the water. Commonly, concentration of dissolved solids (in milligrams per liter) is about 65 percent of specific conductance (in micromhos per cm at 25°C). This relation is not constant from stream to stream or from well to well, and it may even vary in the same source with changes in the composition of the water.

Stage-discharge relation is the relation between gage height (stage) and the volume of water per unit of time flowing in a channel.

Streamflow is the discharge that occurs in a natural channel. Although the term "discharge" can be applied to flow of a canal, the word "streamflow" uniquely describes discharge in a surface stream course. The term "streamflow" is more general than "runoff" as streamflow may be applied to discharge whether or not it is affected by diversion or regulation.

Substrate is the physical surface upon which an organism lived.

Natural substrates refers to any naturally occurring emersed or submersed solid surface, such as a rock or tree, upon which an organism lived.

Artificial substrate is a device which is purposely placed in a stream or lake for colonization of organisms. The artificial substrate simplifies the community structure by standardizing the substrate from which each sample is taken. Examples of artificial substrates are basket samplers (made of wire cages filled with clean streamside rocks) and multi-plate samplers (made of hardboard) for benthic organism collection, and plexiglass strips for periphyton collection.

Suspended (as used in tables of chemical analyses) refers to the amount (concentration) of the total concentration in a water-sediment mixture. The water-sediment mixture is associated with (or sorbed on) that material retained on a 0.45 micrometer filter.

Suspended, recoverable is the amount of a given constituent that is in solution after the part of a representative water-suspended sediment sample that is retained on a 0.45-micrometer membrane filter has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all the particulate matter is not achieved by the digestion treatment and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Determinations of "suspended, recoverable" constituents are made by analyzing portions of material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total recoverable concentrations of the constituent.

Suspended, total is the total amount of a given constituent in the part of a representative water-suspended sediment sample that is retained on a 0.45-micrometer membrane filter. The term is used only when analytical procedure assures measurement of at least 95 percent of the constituent determined. Knowledge of the expected form of the constituent in the sample, as well as analytical methodology used, is required to determine when the results should be reported as "suspended, total."

Determinations of "suspended, total" constituents are made by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total concentrations of the constituent.

Taxonomy is the division of biology concerning classification and naming of organisms. Classification of organisms is based upon a hierarchical scheme beginning with Kingdom and ending with Species at the base. The higher the classification level, the fewer features the organisms have in common: For example, taxonomy of a particular mayfly, Hexagenia limbata is the following:

Kingdom	Animal
Phylum	Arthropoda
Class	Insecta
Order	Ephemeroptera
Family	Ephemeridae
Genus	Hexageria
Species	Hexagenia limbata

Time-weighted average is computed by multiplying the number of days in the sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the total number of days. A time-weighted average represents the composition of water that would be contained in a vessel or reservoir that had received equal quantities of water from the stream each day for the water year.

Tons per day is the quantity of a substance in solution or suspension that passes a stream section during a 24-hour day.

Total (as used in tables of chemical analysis):

Total, recoverable is the amount of a given constituent in solution after a representative water-suspended sediment sample has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all particulate matter is not achieved by digestion treatment, and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the dissolved and suspended phases of the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Total is the total amount of a given constituent in a representative water-suspended sediment sample, regardless of the constituent's physical or chemical form. The term is used only when analytical procedure assures measurement of at least 95 percent of the constituent present in both the dissolved and suspended phases of the sample. Knowledge of the expected form of the constituent in the sample, as well as analytical methodology used, is required to judge when results should be reported as "total." (Note that the word "total" does double duty here, indicating the sample consists of a water-suspended sediment mixture and the analytical method determines all the constituent in the sample.)

WDR is used as an abbreviation for "Water-Data Report" in the REVISED RECORDS paragraph to refer to previously published District annual basic-data reports.

WSP is used as an abbreviation for "Water-Supply Paper" in references to previously published reports.

DOWNSTREAM ORDER AND STATION NUMBER

Since October 1, 1950, the order of listing hydrologic-station records in Survey reports is in a downstream direction along the main stream. All stations on a tributary entering upstream from a main-stream station are listed before that station. A station on a tributary that enters between two main-stream stations is listed between them. A similar order is followed in listing stations on first rank, second rank, and other ranks of tributaries. The rank of any tributary on which a station is situated with respect to the stream to which it is immediately tributary is indicated by an indention in a list of stations in the front of the report. Each indention represents one rank. This downstream order and system of indention show which stations are on tributaries between any two stations and the rank of the tributary on which each station is situated.

As an added means of identification, each hydrologic station and partial-record station has been assigned a station number. These are in the same downstream order used in this report. In assigning station numbers, no distinction is made between partial-record stations and other stations; therefore, the station number for a partial-record station indicates downstream-order position in a list made up of both types of stations. Gaps are left in the series of numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The complete 8-digit number for each station, such as 01094400, which appears just to the left of the station name includes the 2-digit part number "01" plus the 6-digit downstream-order number "094400."

NUMBERING SYSTEM FOR WELLS AND MISCELLANEOUS SITES

The well and miscellaneous site numbering system of the U.S. Geological Survey is based on the grid system of latitude and longitude. The system provides the geographic location of the well or miscellaneous site and a unique number for each site. The number consists of 15 digits. The first 6 digits denote degrees, minutes, and seconds of latitude, the next 7 digits denote degrees, minutes, and seconds of longitude, and the last 2 digits (assigned sequentially) identify wells or other sites within a 1-second grid. See figure 3 below.

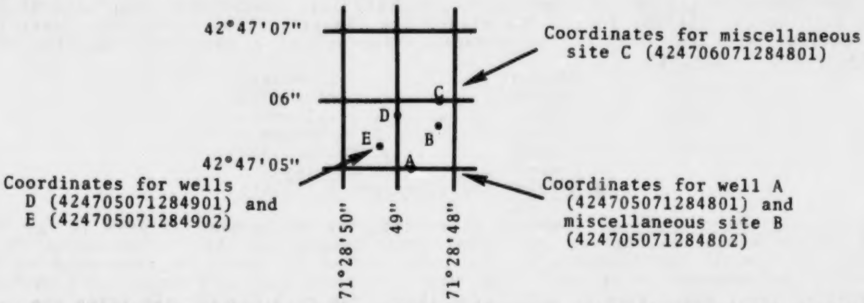
42°47'07"
Coordinates for miscellaneous site C (424706071284801)
06"
C
D
B
E
42°47'05"
A
Coordinates for wells D (424705071284901) and E (424705071284902)
Coordinates for well A (424705071284801) and miscellaneous site B (424705071284802)
71°28'50"
49"
71°28'48"

Figure 3.--System for numbering wells and miscellaneous sites (latitude and longitude)

A local well-numbering system is also used in this report. The local well number consists of a 2-letter code for the town in which the well is located followed by a "W" signifying that it is a well, and a sequential number. The local number is used to identify the location of observation wells on figure 1.

SPECIAL NETWORKS AND PROGRAMS

National stream-quality accounting network (NASQAN) is a collection network designed by the U.S. Geological Survey to meet many of the information demands of agencies or groups involved in national or regional water-quality planning and management. Both accounting and broad-scale monitoring objectives have been incorporated in the network design. Areal configuration of the network is based on river-basin accounting units (identified by 8-digit hydrologic-unit numbers) designated by the Office of Water Data Coordination in consultation with the Water Resources Council. Primary objectives of the network are (1) to depict areal variability of streamflow and water-quality conditions nationwide on a year-by-year basis and (2) to detect and assess long-term changes in streamflow and stream quality.

Pesticide program is a network of regularly sampled water-quality stations where samples are collected to determine the concentration and distribution of pesticides in streams where potential contamination could result from the application of the commonly used insecticides and herbicides. Operation of the network is a Federal interagency activity.

Radiochemical program is a network of regularly sampled water-quality stations where samples are collected twice a year (at high and low flow) to be analyzed for radioisotopes. The streams that are sampled represent major drainage basins in the conterminous United States.

EXPLANATION OF STAGE AND WATER-DISCHARGE RECORDS

Collection and Computation of Data

The base data collected at gaging stations consists of records of stage and measurements of discharge of streams, and stage, surface area, and contents of lakes and reservoirs. In addition, observations of factors affecting the stage-discharge relation, weather records, and other information are used to supplement base data in determining the daily flow. Records of stage are obtained from a water-stage recorder that gives either a tape punched at selected time intervals or a continuous graph of the fluctuations. Measurements of discharge are made with a current meter, using the general methods adopted by the U.S. Geological Survey. These methods are described in standard textbooks and in the U.S. Geological Survey Techniques of Water Resources Investigations, book 3, chapter A6.

For stream-gaging stations, rating tables giving discharge for any stage are prepared from stage-discharge relation curves. If extensions to rating curves are necessary to express discharge greater than measured, they are made on the basis of indirect measurements of peak discharge (such as slope-area or contracted-opening measurements, computation of flow over dams or weirs), step-backwater techniques, velocity-area studies, and logarithmic plotting. The daily mean discharge is computed from gage heights and rating tables; then the monthly and yearly mean discharges are computed from the daily figures. If the stage-discharge relation is subject to change because of frequent or continual change in the physical features that form the control, the daily mean discharge is computed by the shifting-control method, in which correction factors, based on individual discharge measurements and notes by hydrologists and observers, are used in applying the gage heights to the rating tables. If the stage-discharge relation for a station is temporarily changed by the presence of aquatic growth or debris on the control, the daily mean discharge is computed by what is basically the shifting-control method.

At some stream-gaging stations the stage-discharge relation is affected by ice during the winter, and it becomes impossible to compute the discharge in the usual manner. Discharge for periods of ice effect is computed on the basis of the gage-height record and occasional winter discharge measurements. Consideration is given to the available information on temperature and precipitation, notes by hydrologists and observers, and comparable records of discharge for other stations in the same or nearby basins.

For some lake and reservoir stations, capacity tables giving the contents for any stage are prepared from stage-area-relation curves defined by surveys. The application of the stage to the capacity table gives the contents, from which the daily, monthly, or yearly change in contents is computed.

For some gaging stations there are periods when no gage-height record is obtained or the recorded gage height is so faulty that it cannot be used to compute daily discharge. This happens when the recorder stops or otherwise fails to operate properly, intakes are plugged, the float is frozen in the well, or for various other reasons. For such periods, the daily discharges are estimated on the basis of recorded range in stage, prior and subsequent records, discharge measurements, weather records, and comparison with records for other stations in the same or nearby basins.

The data in this report generally comprise a description of the station and tabulations of daily and monthly figures. For gaging stations on streams a table showing the daily discharge and monthly and yearly discharge is given. For gaging stations on lakes and reservoirs a monthly summary table of contents is given. Records are published for the water year, which begins on October 1 and ends on September 30.

The description of the gaging station gives the location, drainage area, period of record, notations of revisions of previously published records, type and history of gages, general remarks, average discharge, and extremes of discharge and stage. Location of the gaging station and the drainage area are obtained from the most accurate maps available. River mileage, given under "LOCATION" for some stations, is that determined and used by the Corps of Engineers or other agencies. Periods for which there are published records for the present station or for stations generally equivalent to the present one are given under "PERIOD OF RECORD."

Previously published streamflow records of some stations have been found to be in error on the basis of data or information obtained later. Revisions of such records are usually published along with current records in one of the annual or compilation reports. For ease in finding such revised records, a paragraph headed "REVISED RECORDS" has been added to the description of all stations for which revised records have been published. Listed therein are all reports in which revisions have been published, each followed by the water years for which figures are revised in that report. In listing water years only one number is given; for instance, 1965 stands for the water year October 1, 1964, to September 30, 1965. If no daily, monthly, or annual figures of discharge are effected by the revision, the fact is brought out by notations after the year dates as follows: "(M)" means that only the instantaneous maximum discharge was revised; "(m)" that only the instantaneous minimum was revised; and "(P)" that only peak discharges were revised. If the drainage area has been revised, the report in which the revised figure was first published is given. It should be noted that for all stations for which cubic feet per second per square mile and runoff in inches are published, a revision of the drainage area necessitates corresponding revision of all figures based on the drainage area. Revised figures of cubic feet per second per square mile and runoff in inches resulting from a revision of the drainage area only are usually not published in the annual series of reports.

The type of gage currently in use, the datum of the present gage referred to National Geodetic Vertical Datum; and a condensed history of the types, locations, and datums of previous gages used during the period of record are given under "GAGE." "National Geodetic Vertical Datum is explained in "DEFINITION OF TERMS."

Information pertaining to the accuracy of the discharge records, to conditions that affect the natural flow at the gaging station, and to supplemental water-quality data collected during the year is given under "REMARKS." For reservoir stations, information on the dam forming the reservoir, the capacity, outlet works, and spillway, and purpose and use of the reservoir is given under "REMARKS." Attention is called to periods for which the discharge is computed or estimated by special methods because of no gage-height record, backwater from various sources, or other unusual conditions. Periods of no gage-height record are indicated if the period is continuous for a month or more or includes the maximum discharge for the year. Periods of backwater from an unusual source, of indefinite stage-discharge relation, or of any other unusual condition at the gage site are indicated only if they are a month or more in length and the accuracy of the records is affected. Days on which the stage-discharge relation is affected by ice are not indicated. Methods used in computing discharge for various unusual conditions have been explained in preceding paragraphs.

The average discharge for the number of years indicated is given under "AVERAGE DISCHARGE;" it is not given for stations having fewer than 5 complete years of record or for stations where changes in water development during the period of record cause the figure to have little significance.

Under "EXTREMES" are given first, extremes for the period of record, second, information available outside the period of record, and last, those for the current year. Unless otherwise qualified, maximum discharge is the instantaneous maximum corresponding to the crest stage obtained by use of a water-stage recorder, a crest-stage gage, or a nonrecording gage read at the time of the crest. If the maximum gage height did not occur on the same day as the maximum discharge, it is given separately. Similarly, minimum is the instantaneous minimum unless otherwise qualified. For some stations, supplemental peak discharges are listed with "EXTREMES FOR THE CURRENT YEAR." If they are, all independent peaks, including the maximum for the year, above the selected base with the time of occurrence and corresponding gage height are published in tabular format. Base discharge, which is given in the table heading, is selected so that an average of about three peaks a year will be presented. Peak discharges are not published for canals, ditches, drains, or for any stream for which the peaks are subject to substantial control by man. Time of day is expressed in 24-hour local standard time; for example, 12:30 a.m. is 0030, 1:30 p.m. is 1330. Minimums for these stations are published in a separate paragraph following the table of peaks.

The daily table for stream-gaging stations gives mean discharge for each day and is followed by monthly and yearly summaries. In the monthly summary below the daily table, the line headed "TOTAL" gives the sum of the daily figures. The line headed "MEAN" gives the average flow in cubic feet per second during the month. The lines headed "MAX" and "MIN" give the maximum and minimum daily discharges, respectively, for the month. Discharge for the month also is usually expressed in cubic feet per second per square mile (line headed "CFSM"), and in inches (line headed "IN."). Figures for cubic feet per second per square mile and runoff in inches are omitted if there is extensive regulation or diversion or if the drainage area includes large noncontributing areas. In the yearly summary below the monthly summary, the figures shown are the appropriate discharges for the calendar and water years. At some stations monthly and (or) yearly observed discharges are adjusted for reservoir storage or diversion, or diversions or reservoir contents are given. These figures are identified by a symbol and corresponding footnote.

For gaging stations on lakes and reservoirs, the data presented comprise a description of the station and a monthly summary table of contents. For some reservoirs, a table showing daily stage is given. A skeleton table of capacity at given stages is published for some reservoirs for which records are published on a daily basis.

Data collected at partial-record stations and miscellaneous sites are contained in two tables following the information for continuous record sites. The first is a table of annual maximum stage and discharge at crest-stage stations, and the second is a table of discharge measurements at miscellaneous sites.

Accuracy of Field Data and Computed Results

Accuracy of streamflow data depends primarily on (1) stability of the stage-discharge relation or, if the control is unstable, frequency of discharge measurements, and (2) accuracy of observations of stage, measurements of discharge, and interpretation of records.

The station description under "REMARKS" states the degree of accuracy of the records. "Excellent" means that about 95 percent of the daily discharges are within 5 percent of true value; "good," within 10 percent; and "fair," within 15 percent. "Poor" means that daily discharges have less than "fair" accuracy.

Figures of daily mean discharge in this report are shown to the nearest hundredth of a cubic foot per second for discharges of less than 1 ft^3/s; to tenths between 1.0 and 10 ft^3/s; to whole numbers between 10 and 1,000 ft^3/s; and to 3 significant figures above 1,000 ft^3/s. The number of significant figures used is based solely on the magnitude of the figure. The same rounding rules apply to discharge figures listed for partial-record stations.

Discharge at many stations, as indicated by the monthly mean, may not reflect natural runoff due to the effects of diversion, consumption, regulation by storage, increase or decrease in evaporation due to artificial causes, or to other factors. For such stations, figures of cubic feet per second per square mile and of runoff in inches are not published unless satisfactory adjustments can be made for diversions, for changes in contents of reservoirs, or for other changes incident to use and control. Evaporation from a reservoir is not included in adjustments for changes in reservoir contents. Even at those stations where adjustments are made, large errors in computed runoff may occur if the adjustments or losses are large in comparison with the observed discharge.

Other Data Available

Information of a more detailed nature than that published for most gaging stations, such as discharge measurements, gage-height records, and rating tables, is on file in the district office. Also, most gaging-station records are available in computer-usable form, and many statistical analyses have been made.

Information on the availability of unpublished data or statistical analyses may be obtained from the district office.

EXPLANATION OF WATER-QUALITY RECORDS

Collection and Examination of Data

Surface-water samples for analyses usually are collected at or near gaging stations. Quality-of-water records are given immediately following the discharge records for these stations.

The descriptive heading for water-quality records gives the period of record for all water-quality data, the period of daily record for parameters that are measured on a daily basis (specific conductance, pH, dissolved oxygen, and water temperature), extremes for the period of daily record, extremes for the current year, and general remarks.

Water Analysis

Most methods for collecting and analyzing water samples are described in the U.S. Geological Survey Techniques of Water-Resources Investigations listed on a following page.

One sample can define adequately the water quality at a given time if the mixture of solutes throughout the stream cross section is homogeneous. However, the concentration of solutes at different locations in the cross section may vary widely with different rates of water discharge, depending on the source of material and the turbulence and mixing of the stream. Some streams must be sampled through several vertical sections to obtain a representative sample needed for an accurate mean concentration and for use in calculating load.

Chemical-quality data published in this report are considered to be the most representative values available for the stations listed. The values reported represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis. In the rare case where an apparent inconsistency exists between reported pH value and the relative abundance of carbon dioxide species (carbonate and bicarbonate), the inconsistency is the result of a slight uptake of carbon dioxide from the air by the sample between measurement of pH in the field and determination of carbonate and bicarbonate in the laboratory.

For chemical-quality stations equipped with digital monitors, the records consist of daily maximum, minimum, and mean values for each constituent measured and are based on hourly punches beginning at 0100 hours and ending at 2400 hours for the day of record. More detailed records (hourly values) may be obtained from the district office.

Water Temperature

Water temperatures are measured at most water-quality stations. In addition, water temperatures are taken at time of most discharge measurements for surface-water stations. Large streams have a small diel temperature change while small, shallow streams may have a daily range of several degrees and may follow closely the changes in air temperature. Some streams may be affected by waste-heat discharges.

At stations where recording instruments are used, either mean temperatures or maximum and minimum temperatures for each day are published.

Sediment

Suspended-sediment concentrations are determined periodically from samples collected by using depth-integrating samplers. Although data collected periodically may represent conditions only at the time of observation, such data are useful in establishing seasonal relations between quality and streamflow when predicting long-term sediment discharge characteristics of the stream.

EXPLANATION OF GROUND-WATER-LEVEL RECORDS

Collection of the Data

Only ground-water-level data from a basic network of 42 observation wells are published herein. This basic network contains observation wells so located that the most significant data are obtained from the fewest wells in the most important aquifers.

Each well is identified by means of (1) a 15-digit number that is based on latitude and longitude, and (2) a local number that is provided for local needs.

Measurements are made in many types of wells, under varying conditions of access, and at different temperatures; hence, neither the method of measurement nor the equipment are standardized. At each observation well, however, the equipment and techniques used are those that will insure that measurements at each well are of consistent accuracy and reliability.

Water-level measurements are reported to the nearest hundredth of a foot with reference to land-surface datum (lsd), which is a datum plane that is approximately at land surface at each well. If known, the altitude of land-surface datum above National Geodetic Vertical Datum of 1929 is given in the well description. Height of the measuring point (MP) above or below land-surface datum is given in each well description. Water levels in wells equipped with recording gages are reported for every fifth day and the end of each month (eom); water levels in wells not equipped with recording gages are reported for the end of each month.

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

Thirty-five manuals by the U.S. Geological Survey have been published to date in the series on techniques describing procedures for planning and executing specialized work in water-resources investigations. Material is grouped under major subject headings called books and further divided into sections and chapters. For example, Section A of Book 3 (Applications of Hydraulics) is on surface water. The chapter, the unit of publication, is limited to a narrow field of subject matter. This format permits flexibility in revision and publication as the need arises. Reports listed below are for sale by U.S. Geological Survey, Branch of Distribution, 1200 South Eads Street, Arlington, VA 22202 (authorized agent of the Superintendent of Documents, Government Printing Office). Prices, effective July 1979, are subject to change. When ordering these publications, please give the series (U.S. Geological Survey Techniques of Water-Resources Investigations), title, book number, and chapter number.

1-D1 Water temperature-influential factors, field measurement, and data presentation, by H. H. Stevens, Jr., J. F. Ficke, and G. F. Smoot: USGS--TWRI Book 1, Chapter D1. 1975. 65 pages. $1.60.

1-D2 Guidelines for collection and field analysis of ground-water samples for selected unstable constituents by W.W. Wood: USGS-TWRI Book 1, Chapter D2 1976 24 pages. $0.85

2-D1 Application of surface geophysics to ground-water investigations, by A. A. R. Zohdy, G. P. Eaton, and D. R. Mabey: USGS--TWRI Book 2, Chapter D1. 1974. 116 pages. $1.90.

2-E1 Application of borehole geophysics to water-resources investigations, by W. S. Keys and L. M. MacCary: USGS--TWRI Book 2, Chapter E1. 1971. 126 pages. $1.75.

3-A1 General field and office procedures for indirect discharge measurements, by M. A. Benson and Tate Dalrymple: USGS-TWRI Book 3, Chapter A1. 1967. 30 pages $1.00.

3-A2 Measurement of peak discharge by the slope-area method, by Tate Dalrymple and M. A. Benson: USGS--TWRI Book 3, Chapter A2. 1967. 12 pages. $0.35.

3-A3 Measurement of peak discharge at culverts by indirect methods, by G. L. Bodhaine: USGS--TWRI Book 3, Chapter A3. 1968. 60 pages. $0.40.

3-A4 Measurement of peak discharge at width contractions by indirect methods, by H. F. Matthai: USGS--TWRI Book 3, Chapter A4. 1967. 44 pages. $1.00.

3-A5 Measurement of peak discharge at dams by indirect methods, by Harry Hulsing: USGS--TWRI Book 3 Chapter A5. 1967. 29 pages. $0.35.

3-A6 General procedure for gaging streams, by R. W. Carter and Jacob Davidian: USGS--TWRI Book 3, Chapter A6. 1968. 13 pages. $1.00.

3-A7 Stage measurements at gaging stations, by T. J. Buchanan and W. P. Somers: USGS-TWRI Book 3, Chapter A7. 1968. 28 pages. $1.40.

3-A8 Discharge measurements at gaging stations, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A8. 1969. 65 pages. $1.25.

3-A11 Measurement of discharge by moving-boat method, by G. F. Smoot and C. E. Novak: USGS--TWRI Book 3, Chapter A11. 1969. 22 pages. $1.20.

3-A12 Fluorometric procedures for dye tracing, by J. F. Wilson, Jr.: USGS--TWRI Book 3, Chapter A12. 1968. 31 pages. $0.35. Not currently available.

3-B1 Aquifer-test design, observation, and data analysis, by R. W. Stallman: USGS--TWRI Book 3, Chapter B1. 1971. 26 pages. $0.70.

3-B2 Introduction to ground-water hydraulics, a programed text for self-instruction, by G. D. Bennett: USGS--TWRI Book 3, Chapter B2. 1976. 172 pages. $2.50.

3-C1 Fluvial sediment concepts, by H. P. Guy: USGS--TWRI Book 3, Chapter C1. 1970. 55 pages. $2.50.

3-C2 Field methods for measurement of fluvial sediment, by H. P. Guy and V. W. Norman: USGS--TWRI Book 3, Chapter C2. 1970. 59 pages. $2.50.

3-C3 Computation of fluvial-sediment discharge, by George Porterfield: USGS-TWRI Book 3, Chapter C3 1972. 66 pages. $2.10.

4-A1 Some statistical tools in hydrology, by H. C. Riggs: USGS--TWRI Book 4, Chapter A1. 1968. 39 pages. $1.60.

4-A2 Frequency curves, by H.C. Riggs: USGS--TWRI Book 4, Chapter A2. 1968. 15 pages. $1.20.

4-B1 Low-flow investigations, by H. C. Riggs: USGS--TWRI Book 4, Chapter B1. 1972. 18 pages. $0.65.

4-B2 Storage analyses for water supply, by H. C. Riggs and C. H. Hardison: USGS--TWRI Book 4, Chapter B2. 1973. 20 pages. $0.75.

4-B3 Regional analyses of streamflow characteristics, by H. C. Riggs: USGS--TWRI Book 4, Chapter B3 1973. 15 pages. $0.65.

4-D1 Computation of rate and volume of stream depletion by wells, by C. T. Jenkins: USGS--TWRI Book 4, Chapter D1. 1970. 17 pages. $1.10.

5-A1 Methods for determination of inorganic substances in water and fluvial sediments, by M. W. Skougstad, M. J. Fishman, L. C. Friedman, D. E. Erdmann, and S. S. Duncan, editors: USGS--TWRI Book 5, Chapter A1. 1979. 626 pages. $10.00.

5-A2 Determination of minor elements in water by emission spectroscopy, by P. R. Barnett and E. C. Mallory, Jr.: USGS--TWRI Book 5, Chapter A2. 1971. 31 pages. $0.80.

5-A3 Methods for analysis of organic substances in water, by D. F. Goerlitz and Eugene Brown: USGS--TWRI Book 5, Chapter A3. 1972. 40 pages. $0.90.

5-A4 Methods for collection and analysis of aquatic biological and microbiological samples, edited by P. E. Greeson, T.A. Ehlke, G.A. Irwin, B.W. Lium, and K.V. Slack: USGS--TWRI Book 5, Chapter A4. 1977. 332 pages. $9.25.

5-A5 Methods for determination of radioactive substances in water and fluvial sediments, by L. L. Thatcher, V. J. Janzer, and K. W. Edwards: USGS--TWRI Book 5, Chapter A5. 1977. 95 pages. $5.75.

5-C1 Laboratory theory and methods for sediment analysis, by H.P. Guy: USGS-TWRI Book 5, Chapter C1 1969. 58 pages. $2.10.

7-C1 Finite difference model for aquifer simulation in two dimensions with results of numerical experiments, by P. C. Trescott, G. F. Pinder, and S. P. Larson: USGS--TWRI Book 7, Chapter C1. 1976. 116 pages. $2.30.

7-C2 Computer model of two-dimensional solute transport and dispersion in ground water by L. F. Konikow and J.D. Bredehoeft: USGS-TWRI Book 7, Chapter C2. 1978. 90 pages. $2.75

8-A1 Methods of measuring water levels in deep wells, by M. S. Garber and F. C. Koopman: USGS--TWRI Book 8, Chapter A1. 1968. 23 pages. $1.30.

8-B2 Calibration and maintenance of vertical-axis type current meters, by G. F. Smoot and C. E. Novak: USGS--TWRI Book 8, Chapter B2. 1968. 15 pages. $1.10.

01052500 DIAMOND RIVER NEAR WENTWORTH LOCATION, NH

LOCATION.--Lat 44°52'40", long 71°03'25", Coos County, Hydrologic Unit 01040001, on left bank 1.0 mi (1.6 km) upstream from mouth and 1.6 mi (2.6 km) north of Wentworth Location.

DRAINAGE AREA.--153 mi^2 (396 km^2).

PERIOD OF RECORD.--Discharge: July 1941 to current year.
Water-quality records: Water year 1954.

GAGE.--Water-stage recorder. Altitude of gage is 1,275 ft (389 m), from topographic map.

REMARKS.--Records good except those for winter period, which are fair. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--39 years, 348 ft^3/s (9.855 m^3/s), 30.89 in/yr (785 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,630 ft^3/s (244 m^3/s) June 16, 1943, gage height, 10.66 ft (3.249 m), from rating curve extended above 4,300 ft^3/s (120 m^3/s); maximum gage height, 10.66 ft (3.249 m) June 16, 1943, and Mar. 7, 1979 (ice jam); minimum discharge, 6.8 ft^3/s (0.19 m^3/s) Aug. 27, 28, 1949, Sept. 1, 1952, gage height, 0.81 ft (0.247 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,600 ft^3/s (100 m^3/s) and maximums (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Apr. 11	0200	ice jam		*6.76	2.060	Apr. 15	2200	*1900	53.8	5.73	1.747

Minimum discharge, 32 ft^3/s (0.91 m^3/s) Mar. 4-8, gage height, 1.35 ft (0.411 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43	196	287	165	69	35	450	959	133	370	150	124
2	47	209	249	150	66	34	415	859	144	229	156	225
3	48	936	195	140	63	33	390	752	174	199	152	229
4	69	980	170	135	60	33	435	648	220	142	170	126
5	60	489	160	130	57	32	255	536	220	108	124	89
6	125	353	196	130	55	32	205	470	180	130	106	77
7	148	293	231	125	53	32	175	680	141	130	111	64
8	102	256	216	125	51	33	175	634	132	99	93	56
9	104	229	120	120	49	33	190	892	217	126	722	50
10	98	271	161	120	48	34	500	1030	193	102	435	50
11	94	298	150	170	46	35	1650	703	166	79	199	50
12	104	244	145	570	44	35	1350	599	148	76	276	54
13	198	207	140	450	43	35	1020	540	130	81	638	52
14	286	189	135	370	42	35	970	494	113	124	306	176
15	192	175	135	300	40	35	1450	443	97	106	215	416
16	159	160	135	250	39	36	1520	391	113	110	168	197
17	135	145	130	220	39	37	812	338	119	99	172	118
18	167	152	125	190	38	40	634	314	97	137	137	292
19	222	116	115	170	37	57	506	515	83	87	130	257
20	171	143	110	155	37	350	670	462	77	65	222	158
21	177	230	105	145	37	600	1490	367	141	92	168	128
22	165	247	100	130	36	460	807	317	257	306	126	124
23	145	289	105	125	36	355	657	281	180	523	102	292
24	382	241	125	115	36	280	828	255	135	577	86	312
25	850	237	550	110	36	215	1200	227	121	295	74	180
26	413	286	880	100	36	166	1930	201	95	180	68	297
27	280	1240	536	94	36	133	1740	188	435	341	65	482
28	223	788	309	89	35	123	1280	174	300	388	87	332
29	203	469	235	83	35	140	1020	160	162	215	81	242
30	220	361	200	78	---	230	897	148	132	186	63	195
31	223	---	180	73	---	495	---	137	---	206	63	---
TOTAL	5853	10429	6630	5327	1299	4223	25621	14714	4855	5908	5665	5444
MEAN	189	348	214	172	44.8	136	854	475	162	191	183	181
MAX	850	1240	880	570	69	600	1930	1030	435	577	722	482
MIN	43	116	100	73	35	32	175	137	77	65	63	50
CFSM	1.24	2.28	1.40	1.12	.29	.89	5.58	3.11	1.06	1.25	1.20	1.18
IN.	1.42	2.54	1.61	1.30	.32	1.03	6.23	3.58	1.18	1.44	1.38	1.32

CAL YR 1979 TOTAL 125436 MEAN 344 MAX 4590 MIN 18 CFSM 2.25 IN 30.50
WTR YR 1980 TOTAL 95968 MEAN 262 MAX 1930 MIN 32 CFSM 1.71 IN 23.33

01053500 ANDROSCOGGIN RIVER AT ERROL, NH

LOCATION.--Lat 44°46'57", long 71°07'46", Coos County, Hydrologic Unit 01040001, on right bank 0.4 mi (0.6 km) downstream from Errol Dam, 0.4 mi (0.6 km) northeast of Errol, and 0.6 mi (1.0 km) upstream from Clear Stream.

DRAINAGE AREA.--1,045 mi^2 (2,707 km^2).

PERIOD OF RECORD.--Discharge: January 1905 to current year. October 1922 to November 1943, monthly discharge only, published in WSP 1301. Prior to 1922, published as "at Errol Dam."
Water-quality records: Water years 1955, 1958-59.

REVISED RECORDS.--WSP 1001: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,227.30 ft (374.081 m) National Geodetic Vertical Datum of 1929. Prior to Dec. 8, 1943, nonrecording gage at Errol Dam at datum 5.0 ft (1.52 m) higher.

REMARKS.--Records good. Flow regulated by Rangeley, Mooselookmeguntic, Richardson, Aziscohos, and Umbagog Lakes (Reservoirs in Androscoggin River basin), combined usable capacity, 28,100,000,000 ft^3 (796,000,000 m^3), with final regulation at Errol Dam. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--75 years, 1,903 ft^3/s (53.89 m^3/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 16,100 ft^3/s (456 m^3/s) May 22, 1969; minimum daily, leakage only at various times when gates in dam were closed.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 2,300 ft^3/s (65.1 m^3/s) Apr. 16; minimum daily discharge, 536 ft^3/s (15.2 m^3/s) Apr. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1490	1530	1540	1590	1840	1660	996	1190	1280	906	1290	1390
2	1460	1500	1510	1610	1800	1660	1160	901	1320	1100	1250	1370
3	1450	1450	1450	1650	1760	1660	1020	809	1260	1190	1260	1180
4	1380	1400	1490	1690	1750	1660	913	1030	1210	1240	1320	1220
5	1380	1290	1610	1680	1710	1630	916	1150	1180	1330	1320	1390
6	1340	1320	1690	1730	1680	1520	1080	1190	1180	1310	1320	1410
7	1340	1340	1700	1770	1680	1650	1170	991	1240	1300	1320	1400
8	1380	1340	1620	1780	1680	1570	1180	801	1270	1340	1350	1410
9	1400	1520	1650	1890	1690	1600	1130	725	1270	1320	1340	1430
10	1410	1390	1640	1890	1700	1620	536	629	1320	1360	1300	1440
11	1400	1330	1700	1860	1700	1610	768	740	1310	1370	1330	1470
12	1390	1310	1660	1790	1700	1620	878	868	1310	1360	1330	1450
13	1390	1310	1700	1800	1690	1680	672	975	1350	1360	1230	1440
14	1360	1350	1740	1680	1680	1640	1450	1040	1340	1370	1260	1410
15	1380	1350	1890	1660	1660	1580	1930	1100	1340	1400	1320	1090
16	1390	1400	1860	1620	1660	1610	2300	1160	1340	1390	1300	1170
17	1400	1400	1780	1620	1660	1640	2030	1210	1350	1390	1300	1340
18	1400	1400	2040	1620	1670	1720	1650	1140	1360	1390	1330	1280
19	1390	1430	2030	1570	1680	1490	1530	889	1380	1380	1350	1260
20	1380	1450	1940	1570	1690	1470	1480	903	1370	1390	1300	1270
21	1400	1450	2290	1560	1690	1500	1350	1060	1300	1400	1330	1310
22	1370	1460	2040	1610	1710	1490	1270	1150	1270	1330	1370	1310
23	1360	1460	1790	1730	1710	1460	1270	1190	1310	1160	1370	1140
24	1340	1510	1690	1780	1700	1410	1130	1200	1370	1300	1370	1130
25	1060	1500	1730	1860	1680	1390	1120	1180	1370	1200	1390	1330
26	1260	1490	1870	1710	1680	1360	1170	1250	1370	1180	1410	1130
27	1350	1380	1670	1700	1690	1360	1150	1320	1370	1210	1430	988
28	1340	1690	1460	1690	1640	1350	1170	1330	1380	1230	1420	1220
29	1380	1520	1470	1700	1660	1230	1180	1320	1390	1250	1430	1330
30	1410	1630	1500	1720	---	1060	1180	1280	1360	1190	1430	1310
31	1390	---	1560	1780	---	920	---	1260	---	1230	1430	---
TOTAL	42570	42900	53310	52910	49240	46820	36779	32981	39470	39876	41500	39018
MEAN	1373	1430	1720	1707	1698	1510	1226	1064	1316	1286	1339	1301
MAX	1490	1690	2290	1890	1840	1720	2300	1330	1390	1400	1430	1470
MIN	1060	1290	1450	1560	1640	920	536	629	1180	906	1230	988

CAL YR 1979 TOTAL 650328 MEAN 1782 MAX 6090 MIN 806
WTR YR 1980 TOTAL 517374 MEAN 1414 MAX 2300 MIN 536

01054000 ANDROSCOGGIN RIVER NEAR GORHAM, NH

LOCATION.--Lat 44°26'10", long 71°11'27", Coos County, Hydrologic Unit 01040001, on right bank at Pulsifer Rips, 2.2 mi (3.5 km) downstream from Dead River, and 4.0 mi (6.4 km) upstream from Gorham.

DRAINAGE AREA.--1,363 mi^2 (3,530 km^2).

PERIOD OF RECORD.--October 1913 to current year. October 1922 to February 1929, monthly discharge only, published in WSP 1301. Prior to October 1928, published as "at Berlin."

GAGE.--Water-stage recorder. Datum of gage is 832.88 ft (253.862 m) National Geodetic Vertical Datum of 1929. Prior to Sept. 30, 1922, nonrecording gage showing head and tailwater elevations at site 3 mi (5 km) upstream at different datum.

REMARKS.--Records good except those for period of no gage-height record, Mar. 22 to Apr. 25, which are fair. Flow regulated by Rangeley, Mooselookmeguntic, Richardson, Aziscohos, and Umbagog Lakes, combined usable capacity, 28,100,000,000 ft^3 (796,000,000 m^3), with final regulation at Errol Dam 35 mi (56 km) upstream. Diurnal fluctuation caused by powerplant 0.8 mi (1.3 km) upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--67 years, 2,462 ft^3/s (69.72 m^3/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 20,000 ft^3/s (566 m^3/s) June 18, 1917, Apr. 30, 1923; minimum daily, 795 ft^3/s (22.5 m^3/s) Mar. 15, 1948.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,000 ft^3/s (113 m^3/s) Apr. 16, gage height, unknown; minimum daily discharge, 1,290 ft^3/s (36.5 m^3/s) July 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1610	1720	1930	1910	1920	1750	1600	2360	1540	1840	1480	1640
2	1640	1850	1940	1970	1950	1800	1830	2300	1580	1290	1800	1780
3	1610	2330	1870	1900	1880	1810	1960	1850	1690	1760	1520	1850
4	1750	2980	1750	1880	1890	1800	1770	1710	1700	1490	1510	1500
5	1620	2240	1850	1890	1880	1800	1550	1800	1670	1560	1480	1500
6	1830	1880	1940	1880	1820	1740	1520	1830	1560	1590	1450	1590
7	1710	1770	2040	1920	1830	1700	1620	2120	1500	1560	1440	1570
8	1630	1800	2040	1970	1820	1820	1700	2040	1560	1540	1440	1550
9	1630	1780	1810	2020	1810	1700	1800	2050	1620	1600	1520	1540
10	1620	1870	1920	2050	1830	1770	3450	2450	1630	1570	1550	1580
11	1630	1850	2020	2100	1830	1780	2550	2000	1610	1570	1450	1580
12	1610	1750	1990	2220	1850	1750	2800	1860	1590	1560	1520	1620
13	1730	1680	2100	2100	1840	1760	2800	1800	1580	1560	1590	1590
14	1720	1670	2080	2050	1820	1870	2850	1780	1570	1570	1500	1720
15	1690	1670	1940	2050	1820	1740	3700	1780	1560	1490	1490	2010
16	1670	1690	2230	1960	1810	1700	3700	1750	1580	1380	1490	1530
17	1640	1650	2120	1930	1780	1790	3350	1730	1580	1400	1440	1520
18	1630	1690	2000	1910	1780	1910	2650	1760	1560	1430	1440	1620
19	1640	1680	2210	1840	1830	1850	2250	1850	1560	1410	1480	1580
20	1620	1720	2160	1820	1840	1770	2200	1660	1560	1390	1540	1470
21	1620	1730	2190	1780	1850	1730	2500	1560	1660	1410	1500	1470
22	1630	1740	2410	1670	1840	1790	2150	1640	1650	1530	1510	1600
23	1640	1820	2180	1940	1870	1820	2050	1630	1580	1720	1510	1870
24	2230	1740	2010	1940	1860	1800	2100	1640	1560	1620	1500	1810
25	1840	1820	2250	1890	1840	1780	2000	1610	1580	1520	1490	1620
26	1700	1920	2940	1910	1820	1750	2660	1550	1560	1300	1510	1910
27	1700	2680	2680	1890	1820	1700	3110	1630	1550	1410	1520	1850
28	1660	2520	2060	1880	1810	1740	2640	1640	1540	1720	1580	1580
29	1670	2330	1940	1840	1750	1800	2370	1630	1560	1580	1560	1640
30	1710	2110	1940	1810	---	1820	2440	1590	1730	1480	1540	1600
31	1640	---	1910	1830	---	1730	---	1560	---	1390	1570	---
TOTAL	52270	57680	64450	59750	53290	55070	71670	56160	47770	47240	46920	49290
MEAN	1686	1923	2079	1927	1838	1776	2389	1812	1592	1524	1514	1643
MAX	2230	2980	2940	2220	1950	1910	3700	2450	1730	1840	1800	2010
MIN	1610	1650	1750	1670	1750	1700	1520	1550	1500	1290	1440	1470

CAL YR 1979 TOTAL 858280 MEAN 2351 MAX 9910 MIN 1370
WTR YR 1980 TOTAL 661560 MEAN 1808 MAX 3700 MIN 1290

01064300 ELLIS RIVER NEAR JACKSON, NH

LOCATION.--Lat 44°13'12", long 71°15'00", Carroll County, Hydrologic Unit 01060002, in White Mountain National Forest, on right bank 0.4 mi (0.6 km) upstream from small left-bank tributary, 1.3 mi (2.1 km) upstream from bridge on State Highway 16, and 6 mi (10 km) northwest of Jackson.

DRAINAGE AREA.--10.9 mi^2 (28.2 km^2).

PERIOD OF RECORD.--December 1963 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,500 ft (457 m), from topographic map. Prior to Oct. 14, 1969, at site 0.3 mi (0.5 km) downstream at different datum.

REMARKS.--Records good except those for winter period and periods of no gage-height record Dec. 18 to Jan. 22, Apr. 2-15, July 8 to Aug. 18, which are poor. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--16 years (water years 1965-80), 33.5 ft^3/s (0.949 m^3/s), 41.74 in/yr (1,060 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,500 ft^3/s (127 m^3/s) Nov. 3, 1966, gage height, 10.34 ft (3.152 m), from recorder, affected by drawdown, 18.9 ft (5.76 m), from floodmarks, site and datum then in use, from rating curve extended above 390 ft^3/s (11 m^3/s) on basis of slope-area measurement at gage height 10.34 ft (3.152 m); minimum not determined, occurred during ice effect in March 1980. Minimum daily, 2.2 ft^3/s (0.062 m^3/s) Mar. 2-4, 1980.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 400 ft^3/s (11 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 6	0300	586	16.6	3.60	1.097	Apr. 10	--	a*1170	33	unknown	
Oct. 24	1400	559	15.8	3.53	1.076	Apr. 29	1915	735	20.8	3.95	1.204
Nov. 26	2330	a1130	32	4.72	1.439						

a From rating curve extended as explained above.

Minimum discharge not determined; minimum daily, 2.2 ft^3/s (0.06 m^3/s) Mar. 2-4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	25	31	23	4.5	2.3	15	91	21	18	6.0	9.4
2	19	25	27	20	4.5	2.2	15	117	23	15	6.0	11
3	39	77	25	18	4.5	2.2	13	91	24	15	6.0	19
4	81	51	24	16	4.0	2.2	15	62	29	12	6.2	12
5	35	36	23	15	4.0	2.3	12	46	34	11	7.0	11
6	180	31	22	14	3.8	2.3	12	60	24	11	10	10
7	51	30	21	13	3.6	2.4	11	66	19	10	9.0	9.0
8	38	28	20	12	3.5	2.4	25	64	21	13	8.0	8.3
9	32	26	20	12	3.4	2.4	70	47	22	18	7.3	7.3
10	28	32	20	12	3.3	2.4	350	38	18	15	7.1	8.3
11	26	31	20	14	3.2	2.4	200	37	17	13	7.0	7.3
12	27	28	21	18	3.1	2.4	72	65	15	14	7.1	6.7
13	33	26	22	28	3.0	2.3	85	49	14	12	7.2	6.1
14	34	25	20	20	3.0	2.3	70	45	14	11	7.2	33
15	29	21	18	18	2.9	2.3	150	35	14	10	7.2	32
16	28	24	17	15	2.8	2.3	70	32	16	9.8	7.1	8.3
17	25	28	16	14	2.8	2.4	32	33	14	9.6	7.0	15
18	33	19	16	13	2.9	23	25	41	13	9.0	7.5	16
19	33	17	15	12	3.0	20	25	121	13	8.0	8.5	14
20	35	18	15	11	3.1	14	47	56	15	7.5	11	13
21	38	19	15	11	3.3	10	67	43	33	7.0	9.8	12
22	37	19	15	11	3.5	8.1	33	42	31	8.0	9.4	12
23	31	21	22	11	3.7	8.0	34	40	19	9.8	7.6	12
24	156	20	23	11	4.0	7.5	71	36	16	10	7.0	11
25	66	19	190	11	4.3	7.0	87	32	15	9.0	6.7	11
26	42	171	100	9.0	3.5	6.6	160	28	14	7.0	6.1	38
27	34	303	60	8.0	3.0	6.4	71	24	13	6.4	5.3	31
28	30	65	45	7.0	2.7	7.0	73	22	12	6.5	8.3	21
29	29	48	35	6.0	2.5	9.0	290	20	11	6.4	7.0	17
30	28	38	30	5.5	---	17	164	18	12	6.3	6.4	16
31	26	---	26	5.0	---	16	---	18	---	6.2	8.3	---
TOTAL	1336	1321	974	413.5	99.4	199.1	2364	1519	556	324.5	231.3	437.7
MEAN	43.1	44.0	31.4	13.3	3.43	6.42	78.8	49.0	18.5	10.5	7.46	14.6
MAX	180	303	190	28	4.5	23	350	121	34	18	11	38
MIN	13	17	15	5.0	2.5	2.2	11	18	11	6.2	5.3	6.1
CFSM	3.95	4.04	2.88	1.22	.32	.59	7.23	4.50	1.70	.96	.68	1.34
IN.	4.56	4.51	3.32	1.41	.34	.68	8.07	5.18	1.90	1.11	.79	1.49

CAL YR 1979 TOTAL 15032.0 MEAN 41.2 MAX 847 MIN 4.8 CFSM 3.78 IN 51.30
WTR YR 1980 TOTAL 9775.5 MEAN 26.7 MAX 350 MIN 2.2 CFSM 2.45 IN 33.36

01064400 LUCY BROOK NEAR NORTH CONWAY, NH

LOCATION.--Lat 44°04'10", long 71°10'30", Carroll County, Hydrologic Unit 01060002, on left bank 1.6 mi (2.6 km) upstream from mouth and 2.5 mi (4.0 km) northwest of North Conway.

DRAINAGE AREA.--4.68 mi^2 (12.12 km^2).

PERIOD OF RECORD.--June 1964 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 710 ft (216 m), from topographic map.

REMARKS.--Records fair except those for winter period, and those for period of no gage-height record Mar. 26 to Apr. 16, June 24 to July 25, Aug. 30 to Sept. 30, which are poor. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--16 years, 11.0 ft^3/s (0.312 m^3/s), 31.92 in/yr (811 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,320 ft^3/s (37.4 m^3/s) Apr. 27, 1979, recorded gage height, 8.49 ft (2.588 m), affected by drawdown, river stage unknown, from rating curve extended above 140 ft^3/s (4.0 m^3/s) on basis of slope-area measurement at gage height, 8.14 ft (2.481 m) recorded, 9.20 ft^3/s (2.804 m) from floodmarks; minimum discharge, 0.32 ft^3/s (0.009 m^3/s) Sept. 2, 3, 29, 30, 1968.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 190 ft^3/s (5.4 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	(m^3/s)	Gage height (ft)	(m)	Date	Time	Discharge (ft^3/s)	(m^3/s)	Gage height (ft)	(m)
Apr. 10	--	a*340	9.6	unknown							

a From rating curve extended as explained above.

Minimum discharge, 0.45 ft^3/s (0.013 m^3/s) Aug. 18, 19, 25-29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.4	7.7	11	5.5	2.3	1.1	7.0	27	4.5	3.0	.81	.72
2	4.6	7.7	9.0	5.3	2.2	1.0	7.0	25	4.1	2.7	.81	.90
3	14	31	8.2	5.2	2.0	1.0	6.8	20	4.1	2.5	.81	1.5
4	30	24	7.7	5.0	1.9	1.0	7.0	16	5.2	2.3	.81	1.0
5	12	15	7.0	5.0	1.8	1.0	6.4	14	4.5	2.0	.90	.90
6	58	12	6.8	4.9	1.8	1.1	5.8	13	4.1	1.8	1.4	.80
7	17	11	6.4	4.8	1.7	1.1	5.4	13	3.9	1.5	1.0	.72
8	13	9.8	6.0	4.8	1.7	1.1	20	16	3.9	1.9	.80	.66
9	11	8.8	6.1	4.7	1.6	1.1	50	15	3.9	2.5	.66	.58
10	9.7	12	5.9	4.6	1.6	1.2	250	13	3.5	2.4	.60	.66
11	8.6	11	5.7	6.4	1.5	1.2	120	12	3.5	2.1	.60	.62
12	8.8	8.8	5.7	8.0	1.5	1.1	50	11	3.3	2.3	.60	.58
13	10	8.0	5.7	12	1.4	1.1	60	9.8	3.1	2.1	.60	.52
14	11	8.0	5.5	10	1.4	1.1	50	9.8	3.0	1.9	.60	2.7
15	10	7.7	6.1	8.0	1.4	1.1	110	8.6	3.0	1.7	.60	2.6
16	9.4	7.1	4.8	7.4	1.3	1.1	42	8.2	2.8	1.5	.58	1.7
17	8.4	6.9	4.7	6.6	1.3	1.1	28	7.9	2.5	1.4	.56	1.2
18	10	6.6	4.5	6.0	1.4	11	21	6.9	2.4	1.3	.54	1.4
19	11	6.4	4.3	5.6	1.4	7.0	19	8.6	2.1	1.2	1.2	1.2
20	11	6.1	4.2	5.2	1.5	6.4	21	8.6	3.3	1.2	1.6	1.1
21	23	5.9	4.1	5.0	1.5	4.5	29	7.9	16	1.2	.98	1.0
22	22	5.5	4.0	5.0	1.6	4.0	18	7.2	6.3	1.4	.81	.97
23	10	5.5	4.0	5.0	1.7	3.7	15	6.9	4.3	1.7	.74	.97
24	50	5.5	4.1	5.0	1.8	3.5	16	6.3	3.1	1.8	.61	.95
25	20	5.5	39	4.5	2.0	3.3	19	6.0	2.6	1.5	.50	.90
26	13	33	20	4.0	1.7	3.1	25	5.4	2.4	1.2	.45	3.0
27	10	62	9.8	3.5	1.5	3.0	20	5.4	2.3	1.1	.45	2.5
28	9.0	24	7.4	3.2	1.4	3.5	25	4.7	2.2	1.1	.45	1.7
29	8.6	16	6.9	2.9	1.3	5.0	43	4.7	2.0	1.1	.56	1.5
30	8.0	13	6.1	2.7	---	8.5	46	4.7	2.1	1.1	.54	1.3
31	7.7	---	5.7	2.4	---	7.5	---	4.5	---	.98	.66	---
TOTAL	452.2	391.5	236.4	168.2	47.2	92.5	1142.4	327.1	114.0	53.48	22.83	36.85
MEAN	14.6	13.1	7.63	5.43	1.63	2.98	38.1	10.6	3.80	1.73	.74	1.23
MAX	58	62	39	12	2.3	11	250	27	16	3.0	1.6	3.0
MIN	3.4	5.5	4.0	2.4	1.3	1.0	5.4	4.5	2.0	.98	.45	.52
CFSM	3.12	2.80	1.63	1.16	.35	.64	8.14	2.27	.81	.37	.16	.26
IN.	3.59	3.11	1.88	1.34	.38	.74	9.08	2.60	.91	.43	.18	.29

CAL YR 1979 TOTAL 5769.80 MEAN 15.8 MAX 366 MIN 1.7 CFSM 3.38 IN 45.85
WTR YR 1980 TOTAL 3084.66 MEAN 8.43 MAX 250 MIN .45 CFSM 1.80 IN 24.51

01064500 SACO RIVER NEAR CONWAY, NH

LOCATION.--Lat 43°59'27", long 71°05'29", Carroll County, Hydrologic Unit 01060002, on left bank at Odell Falls 1.8 mi (2.9 km) downstream from Swift River and Conway.

DRAINAGE AREA.--386 mi^2 (1,000 km^2).

PERIOD OF RECORD.--August 1903 to December 1909, January 1910 to June 1912 (gage heights only), February 1929 to current year. Monthly discharge only for some periods, published in WSP 1301. Prior to 1912, published as "at Center Conway."

REVISED RECORDS.--WSP 756: Drainage area. WSP 1301: 1908-9.

GAGE.--Water-stage recorder. Datum of gage is 418.19 ft (127.464 m) National Geodetic Vertical Datum of 1929. Aug. 26, 1903, to June 30, 1912, nonrecording gage at site 0.8 mi (1.3 km) downstream at different datum.

REMARKS.--Records good except those for winter period, which are fair. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--57 years (water years 1904-9, 1930-80), 930 ft^3/s (26.34 m^3/s), 32.72 in/yr (831 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 43,900 ft^3/s (1,240 m^3/s) Mar. 27, 1953, gage height, 17.20 ft (5.243 m), from rating curve extended above 23,000 ft^3/s (650 m^3/s) on basis of slope-area measurement of peak flow; maximum gage height, 19.03 ft (5.800 m) Mar. 7, 1979, ice jam; minimum discharge, 40 ft^3/s (1.13 m^3/s) Mar. 16, 1932, gage height, 1.61 ft (0.491 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 8,700 ft^3/s (250 m^3/s) and maximums (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Nov. 27	0800	11100	312	8.76	2.670	Apr. 15	2000	9310	264	8.19	2.496
Apr. 10	1500	*16400	464	10.34	3.152						

Minimum discharge, 75 ft^3/s (2.12 m^3/s) Mar. 16, gage height, 1.75 ft (0.533 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	278	666	1200	555	285	200	1010	2820	466	329	187	141
2	351	629	1070	500	280	200	1070	2840	461	337	166	160
3	379	1470	939	460	270	200	974	2240	502	318	166	269
4	2020	1930	899	400	270	200	1200	1990	608	281	168	297
5	1050	1210	844	380	270	200	990	1510	602	253	162	220
6	2440	1010	804	360	270	205	949	1380	533	237	157	179
7	1520	914	846	350	270	205	909	1570	456	224	187	151
8	900	840	798	325	270	210	934	1760	432	218	179	136
9	680	782	656	320	265	215	860	1530	447	234	153	123
10	600	911	684	310	265	215	11400	1280	423	227	134	117
11	900	982	685	300	260	220	7660	1150	396	209	132	113
12	750	840	685	2050	261	215	4160	1180	375	221	144	109
13	620	771	723	1160	260	205	3920	1170	353	221	152	104
14	1400	745	640	860	255	205	3470	1080	333	221	164	106
15	800	714	543	790	255	205	5600	970	314	207	154	194
16	600	674	470	700	250	200	5000	852	314	195	145	354
17	520	627	425	600	250	205	2610	814	310	190	134	245
18	490	621	360	545	250	390	1960	799	288	182	133	196
19	460	583	320	500	250	1500	1660	1520	274	172	139	199
20	430	561	305	470	240	936	1620	1300	292	164	182	215
21	415	557	300	440	235	647	2170	995	778	159	200	183
22	400	550	290	405	225	563	1750	882	756	174	186	170
23	390	566	285	390	230	603	1380	799	518	201	163	166
24	380	559	290	360	230	723	1470	742	410	188	146	160
25	1650	562	1030	320	225	728	1750	702	358	182	133	151
26	1350	930	1970	290	220	620	2640	644	322	164	126	142
27	1100	6990	1140	320	200	620	2280	596	295	158	120	215
28	950	2620	920	350	200	685	2100	555	270	162	118	379
29	820	1790	770	360	200	860	2270	518	257	158	122	275
30	769	1420	680	330	---	1200	4430	492	267	178	122	219
31	704	---	610	290	---	1130	---	466	---	199	123	---
TOTAL	26116	34024	22181	15790	7211	14710	80196	37146	12410	6563	4697	5688
MEAN	842	1134	716	509	249	475	2673	1198	414	212	152	190
MAX	2440	6990	1970	2050	285	1500	11400	2840	778	337	200	379
MIN	278	550	285	290	200	200	860	466	257	158	118	104
CFSM	2.18	2.94	1.86	1.32	.65	1.23	6.93	3.10	1.07	.55	.39	.49
IN.	2.52	3.28	2.14	1.52	.69	1.42	7.73	3.58	1.20	.63	.45	.55

CAL YR 1979 TOTAL 434664 MEAN 1191 MAX 19800 MIN 145 CFSM 3.09 IN 41.89
WTR YR 1980 TOTAL 266732 MEAN 729 MAX 11400 MIN 104 CFSM 1.89 IN 25.71

01065000 OSSIPEE RIVER AT EFFINGHAM FALLS, NH

LOCATION.--Lat 43°47'44", long 71°03'36", Carroll County, Hydrologic Unit 01060002, on left bank 0.3 mi (0.5 km) upstream from bridge on State Highway 153 at Effingham Falls, 0.3 mi (0.5 km) downstream from outlet of Ossipee Lake, and 4 mi (6 km) northwest of Effingham.

DRAINAGE AREA.--330 mi^2 (855 km^2).

PERIOD OF RECORD.--Discharge: September 1942 to current year.
Water-quality records: Water year 1955.

GAGE.--Water-stage recorder. Altitude of gage is 390 ft (119 m), from topographic map.

REMARKS.--Records excellent except those for period of no gage-height record, May 1-29. Flow regulated by Ossipee and Silver Lakes and Pine River Pond, combined capacity, 1,430,000,000 ft^3 (40,500,000 m^3). Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--38 years, 690 ft^3/s (19.54 m^3/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,700 ft^3/s (331 m^3/s) Mar. 28, 1953, gage height, 11.64 ft (3.548 m); minimum, about 5 ft^3/s (0.14 m^3/s) during part of several days Nov. 4-20, 1968 (caused by unusual regulation); minimum daily, 11 ft^3/s (0.31 m^3/s) Oct. 10, 1944.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,860 ft^3/s (109 m^3/s) Apr. 12, gage height, 8.05 ft (2.454 m); minimum, 136 ft^3/s (3.85 m^3/s) Aug. 26 to Sept. 2; minimum daily, 136 ft^3/s (3.85 m^3/s) Aug. 27-29, Sept. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	282	624	477	668	220	244	1120	950	214	198	146	136
2	285	604	480	663	180	243	1140	940	302	202	146	137
3	288	623	483	658	180	242	1140	930	323	488	148	140
4	447	681	484	652	180	240	1250	880	325	708	153	141
5	948	731	485	646	180	241	1400	820	325	696	151	142
6	1160	762	486	639	181	241	1360	680	334	686	151	142
7	1140	769	487	632	181	202	1250	480	326	371	149	145
8	1120	762	489	623	181	177	1160	600	308	184	147	146
9	1090	747	489	616	181	178	1130	800	307	185	148	144
10	1050	742	490	606	184	178	1700	600	327	183	144	143
11	1020	744	491	521	184	180	3380	520	356	321	144	142
12	842	749	492	401	183	180	3820	580	353	350	179	141
13	745	748	493	403	183	180	3570	680	236	266	203	140
14	750	743	493	403	183	219	3180	520	192	195	144	141
15	838	732	494	403	183	247	2900	500	192	147	144	142
16	917	730	491	404	183	245	2900	480	192	147	142	142
17	960	730	489	406	183	245	2780	540	191	147	142	144
18	966	730	487	383	183	252	2520	560	191	148	140	147
19	934	680	488	365	208	346	2220	580	191	147	140	234
20	901	629	487	366	252	770	1920	500	193	148	140	289
21	867	481	484	318	250	1080	1730	490	195	147	140	287
22	830	384	482	247	250	1060	1340	540	200	146	139	286
23	791	387	481	247	250	1050	1120	540	360	146	138	285
24	761	387	481	250	250	1040	1080	540	430	146	138	281
25	719	388	490	250	248	1050	939	560	427	145	138	279
26	732	395	737	250	247	1060	881	540	432	144	137	410
27	734	416	852	250	247	1060	890	470	395	144	136	507
28	711	449	1020	250	246	1060	887	370	236	144	136	500
29	694	463	957	250	245	1060	895	210	195	144	136	407
30	647	471	927	250	---	1080	950	211	195	146	140	264
31	658	---	778	250	---	1110	---	212	---	145	148	---
TOTAL	24827	18481	17444	13270	6006	16760	52552	17823	8443	7514	4527	6584
MEAN	801	616	563	428	207	541	1752	575	281	242	146	219
MAX	1160	769	1020	668	252	1110	3820	950	432	708	203	507
MIN	282	384	477	247	180	177	881	210	191	144	136	136

CAL YR 1979 TOTAL 295280 MEAN 809 MAX 3630 MIN 196
WTR YR 1980 TOTAL 194231 MEAN 531 MAX 3820 MIN 136

01072100 SALMON FALLS RIVER AT MILTON, NH

LOCATION.--Lat 43°24'50", long 70°59'15", Strafford County, Hydrologic Unit 01060003, on right bank just downstream from Milton Pond at Milton.

DRAINAGE AREA.--108 mi² (280 km²).

PERIOD OF RECORD.--October 1968 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 405 ft (123 m), from topographic map.

REMARKS.--Records good. Flow regulated by Great East and Lovell Lakes and Horn, Wilson, and Milton (also controls Northeast and Town House) Ponds, combined usable capacity, 1,280,000,000 ft³ (36,250,000 m³). Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--12 years, 201 ft³/s (5.692 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,500 ft³/s (99.1 m³/s) Mar. 15, 1977, gage height, 6.50 ft (1.981 m); minimum daily, 19 ft³/s (0.54 m³/s) Aug. 30, Sept. 13, 1970.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,780 ft³/s (50.4 m³/s) Apr. 11, gage height, 5.52 ft (1.682 m); minimum daily, 39 ft³/s (1.10 m³/s) Mar. 6-11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	51	136	194	201	114	44	235	550	62	46	44	46
2	48	136	179	185	96	46	224	438	62	46	44	46
3	90	204	158	170	86	46	198	380	62	46	45	46
4	269	339	147	155	114	46	194	380	61	46	48	46
5	273	348	136	144	121	42	224	285	62	46	49	46
6	273	335	136	134	94	39	250	235	62	46	49	46
7	273	322	136	139	78	39	277	239	62	46	49	46
8	265	322	142	153	70	39	265	242	61	46	49	45
9	246	301	147	134	61	40	265	245	60	46	49	44
10	246	273	139	116	58	40	621	265	54	46	49	44
11	246	273	136	136	67	40	1560	273	51	43	47	44
12	246	273	131	158	73	42	1270	257	51	44	43	44
13	246	269	129	158	65	58	855	242	49	44	43	43
14	250	257	139	150	58	86	608	221	47	44	43	43
15	254	239	139	139	53	94	449	170	46	44	43	43
16	239	224	131	136	50	88	413	102	44	44	43	42
17	211	201	124	142	49	84	444	58	42	44	43	42
18	211	198	124	153	46	72	366	57	44	44	43	42
19	194	179	129	147	44	84	326	57	44	44	43	42
20	142	170	136	139	44	131	330	58	44	44	43	42
21	142	170	121	131	46	158	210	69	44	44	43	42
22	142	158	111	121	47	285	167	86	44	44	42	42
23	136	147	107	134	47	285	191	90	44	44	42	42
24	134	147	105	139	47	228	198	90	44	44	42	42
25	153	136	131	124	48	191	198	90	44	44	42	42
26	158	147	261	111	48	167	201	90	44	44	43	42
27	158	182	330	98	47	147	204	86	46	44	46	43
28	158	211	330	126	47	150	204	80	46	44	46	48
29	158	214	297	142	46	161	295	75	46	44	46	68
30	153	211	261	142	---	201	497	70	46	44	46	84
31	147	---	235	136	---	232	---	65	---	44	46	---
TOTAL	5912	6722	5121	4393	1864	3405	11739	5645	1518	1383	1393	1377
MEAN	191	224	165	142	64.3	110	391	182	50.6	44.6	44.9	45.9
MAX	273	348	330	201	121	285	1560	550	62	46	49	84
MIN	48	136	105	98	44	39	167	57	42	43	42	42

CAL YR 1979 TOTAL 79029 MEAN 217 MAX 1690 MIN 31
WTR YR 1980 TOTAL 50472 MEAN 138 MAX 1560 MIN 39

01073000 OYSTER RIVER NEAR DURHAM, NH

LOCATION.--Lat 43°08'55", long 70°57'56", Strafford County, Hydrologic Unit 01060003, on left bank 200 ft (60 m) upstream from highway bridge, 2.5 mi (4.0 km) west of Durham, and 7 mi (11 km) upstream from mouth.

DRAINAGE AREA.--12.1 mi^2 (31.3 km^2).

PERIOD OF RECORD.--October 1934 to current year. October and November 1934 monthly discharge only, published in WSP 1301.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 70 ft (21 m), from topographic map. Prior to Oct. 1, 1964, at datum 1.00 ft (0.305 m) higher.

REMARKS.--Records good except those for winter period, which are fair. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--46 years, 19.3 ft^3/s (0.547 m^3/s), 21.66 in/yr (550 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 862 ft^3/s (24.4 m^3/s) Sept. 11, 1954, gage height, 6.47 ft (1.972 m), present datum; maximum gage height, 8.45 ft (2.576 m), present datum, Mar. 19, 1936; minimum discharge, 0.23 ft^3/s (0.007 m^3/s) Aug. 18, 19, 25, 26, 27, 1971.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 170 ft^3/s (4.8 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Apr. 10	1930	*210	5.95	3.44	1.049						

Minimum discharge, 0.43 ft^3/s (0.012 m^3/s) July 27, Aug. 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	9.7	17	13	4.0	2.5	27	56	5.9	3.9	11	1.4
2	35	9.2	15	12	3.5	2.5	24	41	9.4	2.5	41	1.5
3	29	69	14	10	3.5	2.0	22	33	11	2.2	13	1.2
4	58	85	13	9.0	3.5	2.0	40	26	13	2.0	8.2	1.1
5	27	53	12	8.5	3.0	2.0	53	21	8.8	1.5	5.4	1.1
6	21	38	11	8.0	3.0	2.0	37	19	7.2	1.8	5.2	.84
7	16	30	11	8.0	3.0	2.0	28	18	5.7	1.6	4.3	.84
8	12	25	10	7.5	3.0	2.0	24	40	6.1	3.0	3.2	.84
9	14	21	10	7.5	3.0	7.0	24	42	7.2	5.7	2.4	.77
10	16	22	9.0	7.0	3.0	22	141	31	5.4	3.5	1.7	.77
11	16	22	9.0	7.0	3.0	39	157	24	4.5	4.3	1.8	.77
12	18	29	8.0	14	3.0	29	82	21	4.1	4.3	2.5	.77
13	32	25	8.0	10	3.0	18	58	19	3.7	3.9	2.0	.84
14	21	23	8.0	8.3	3.0	13	44	17	3.3	3.2	1.7	.91
15	16	22	7.5	8.0	3.0	14	46	14	3.0	2.7	1.5	1.2
16	14	19	7.0	8.0	3.5	13	45	12	4.1	2.4	1.2	1.1
17	12	18	7.0	7.5	3.5	12	35	10	3.5	2.2	1.1	.99
18	10	17	6.5	7.0	3.5	78	29	9.8	3.0	2.2	.99	.91
19	9.9	17	6.5	7.0	3.5	67	37	11	2.4	1.7	1.5	.84
20	14	16	6.0	6.5	4.0	52	34	9.4	2.7	1.4	2.0	.77
21	17	16	6.0	6.5	4.0	52	28	8.2	5.0	1.2	2.2	.77
22	14	16	6.0	6.0	4.0	75	23	8.0	3.2	1.2	1.8	.69
23	11	15	6.0	7.0	4.5	60	21	7.2	2.5	1.1	1.5	.69
24	11	15	11	6.5	4.5	50	18	6.6	2.1	.91	1.3	.69
25	15	16	59	6.0	4.5	44	15	6.4	2.0	.84	1.1	.69
26	13	21	66	6.2	4.0	36	16	5.7	1.6	.69	.84	1.2
27	11	31	41	5.5	3.5	34	15	5.2	1.6	.62	.84	1.1
28	10	26	27	5.0	3.0	31	17	4.7	1.5	.62	1.1	.99
29	14	22	21	5.0	3.0	29	68	4.5	1.4	.99	.99	.99
30	12	19	18	4.5	---	34	86	4.1	3.2	3.5	1.2	.99
31	11	---	15	4.0	---	31	---	3.7	---	2.1	1.3	---
TOTAL	547.9	766.9	471.5	236.0	100.5	857.0	1294	538.5	138.1	69.77	125.86	28.26
MEAN	17.7	25.6	15.2	7.61	3.47	27.6	43.1	17.4	4.60	2.25	4.06	.94
MAX	58	85	66	14	4.5	78	157	56	13	5.7	41	1.5
MIN	9.9	9.2	6.0	4.0	3.0	2.0	15	3.7	1.4	.62	.84	.69
CFSM	1.46	2.12	1.26	.63	.29	2.28	3.56	1.44	.38	.19	.34	.08
IN.	1.68	2.36	1.45	.73	.31	2.63	3.98	1.66	.42	.21	.39	.09

CAL YR 1979 TOTAL 9317.84 MEAN 25.5 MAX 318 MIN .88 CFSM 2.11 IN 28.64
WTR YR 1980 TOTAL 5174.29 MEAN 14.1 MAX 157 MIN .62 CFSM 1.17 IN 15.91

01073500 LAMPREY RIVER NEAR NEWMARKET, NH

LOCATION.--Lat 43°06'09", long 70°57'11", Rockingham County, Hydrologic Unit 01060003, on right bank 200 ft (60 m) upstream from Packers Falls, 2 mi (3 km) northwest of Newmarket, and 4.6 mi (7.4 km) upstream from mouth.

DRAINAGE AREA.--183 mi^2 (474 km^2).

PERIOD OF RECORD.--Discharge: July 1934 to current year.
Water-quality records: Water year 1954.

REVISED RECORDS.--WSP 1231: 1936-37.

GAGE.--Water-stage recorder. Altitude of gage is 40 ft (12 m), from topographic map.

REMARKS.--Records excellent except those for winter period, which are fair. Some regulation by Pawtuckaway and Mendums Ponds, combined capacity, about 600,000,000 ft^3 (17,000,000 m^3). Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--46 years, 279 ft^3/s (7.901 m^3/s), 20.70 in/yr (526 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,490 ft^3/s (155 m^3/s) Mar. 20, 1936, gage height, 14.88 ft (4.535 m), from rating curve extended above 3,100 ft^3/s (88 m^3/s) on basis of computation of flow over dam at gage height 14.69 ft (4.478 m); minimum daily, 1 ft^3/s (0.03 m^3/s) Oct. 21, 1935.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,600 ft^3/s (45.3 m^3/s) Apr. 12, gage height, 6.36 ft (1.939 m); minimum daily, 3.7 ft^3/s (0.10 m^3/s) Sept. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	71	252	309	250	60	48	397	749	65	39	41	13
2	249	282	282	220	55	45	363	665	67	39	179	12
3	381	474	257	190	52	42	337	557	70	40	228	13
4	609	868	239	170	50	41	411	480	98	41	240	12
5	561	957	230	160	48	40	573	406	103	37	190	11
6	499	859	225	155	45	45	602	347	105	36	139	12
7	401	666	220	150	44	52	536	308	97	34	108	11
8	343	553	210	140	43	98	449	415	89	34	90	9.8
9	339	481	205	135	42	208	397	532	86	40	80	8.6
10	365	455	200	131	42	226	850	544	80	37	65	8.2
11	400	448	195	128	41	327	1500	475	74	33	55	7.5
12	399	504	190	184	41	334	1580	400	67	38	52	6.9
13	455	514	188	170	41	328	1360	353	61	37	47	6.5
14	457	495	186	160	41	263	979	318	65	34	42	6.8
15	437	458	184	150	41	222	813	279	57	30	38	6.7
16	383	415	182	145	42	184	780	253	58	27	34	6.6
17	333	375	180	140	44	174	756	215	57	26	29	3.7
18	323	347	178	135	44	462	666	204	52	23	26	4.0
19	314	322	176	130	46	680	551	206	49	22	24	11
20	287	302	174	120	48	776	479	199	48	21	24	11
21	267	283	172	115	52	752	426	183	51	20	28	9.0
22	262	271	170	114	56	811	377	179	48	19	27	8.8
23	269	265	168	132	58	931	352	155	44	18	26	7.6
24	267	254	166	117	62	868	333	138	41	17	24	6.5
25	337	249	325	97	64	684	279	133	38	16	22	5.8
26	337	268	532	99	66	565	330	118	34	15	20	12
27	319	364	610	100	61	495	340	102	31	17	18	18
28	278	398	500	90	56	439	332	88	28	15	17	23
29	283	389	430	80	56	405	540	77	27	15	16	17
30	282	347	377	70	---	412	799	70	35	26	15	17
31	272	---	306	65	---	412	---	65	---	33	14	---
TOTAL	10779	13115	7966	4242	1441	11369	18487	9213	1825	879	1958	306.0
MEAN	348	437	257	137	49.7	367	616	297	60.8	28.4	63.2	10.2
MAX	609	957	610	250	66	931	1580	749	105	41	240	23
MIN	71	249	166	65	41	40	279	65	27	15	14	3.7
CFSM	1.90	2.39	1.40	.75	.27	2.01	3.37	1.62	.33	.16	.35	.06
IN.	2.19	2.67	1.62	.86	.29	2.31	3.76	1.87	.37	.18	.40	.06

CAL YR 1979 TOTAL 132955.0 MEAN 364 MAX 2890 MIN 18 CFSM 1.99 IN 27.03
WTR YR 1980 TOTAL 81580.0 MEAN 223 MAX 1580 MIN 3.7 CFSM 1.22 IN 16.58

01073600 DUDLEY BROOK NEAR EXETER, NH

LOCATION.--Lat 42°59'37", long 71°01'24", Rockingham County, Hydrologic Unit 01060003, on right bank 2.4 mi (3.9 km) upstream from mouth and 3.5 mi (5.6 km) west of Exeter.

DRAINAGE AREA.--4.97 mi^2 (12.87 km^2).

PERIOD OF RECORD.--May 1962 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 90 ft (27 m), from topographic map.

REMARKS.--Records good except those for winter period, which are fair, and those below 0.5 ft^3/s, (0.01 m^3/s), which are poor.

AVERAGE DISCHARGE.--18 years, 7.08 ft^3/s (0.201 m^3/s), 19.35 in/yr (491 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 358 ft^3/s (10.14 m^3/s) Apr. 2, 1973, gage height, 7.74 ft (2.36 m), from rating curve extended above 210 ft^3/s (5.9 m^3/s); no flow at times some years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 100 ft^3/s (2.8 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar. 12	0015	ice jam		*9.36	2.853	Apr. 10	1645	127	3.60	5.98	1.823
Mar. 18	1215	*143	4.05	6.13	1.868						

Minimum discharge, .02 ft^3/s (0.001 m^3/s) Sept. 11-14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.0	3.9	4.9	3.2	.40	.40	9.0	25	.90	1.0	1.6	.05
2	18	3.5	4.1	2.4	.35	.35	7.8	16	.91	.99	1.0	.05
3	22	19	3.5	2.1	.30	.33	7.8	11	2.3	.81	.60	.04
4	41	55	3.2	1.5	.27	.29	19	8.0	7.2	.60	.50	.04
5	24	22	2.5	1.2	.25	.29	39	6.2	5.7	.40	.40	.05
6	11	11	2.2	.98	.23	.28	16	5.2	3.1	.85	.30	.05
7	7.3	8.0	2.0	.70	.21	.28	11	4.6	1.8	.87	.20	.04
8	6.2	6.8	1.8	.52	.21	5.0	10	26	1.6	.55	.15	.03
9	6.6	6.0	1.7	.50	.21	16	15	37	1.6	1.1	.12	.03
10	11	5.8	1.5	.48	.21	12	75	16	1.4	.92	.08	.02
11	13	7.6	1.4	.44	.21	20	73	9.2	1.2	.49	.07	.02
12	13	13	1.2	2.0	.21	28	27	6.9	.94	.42	.22	.02
13	15	16	1.1	3.0	.22	8.4	16	6.0	.77	.40	.28	.02
14	14	11	1.0	2.0	.22	2.4	12	5.5	.66	.31	.19	.03
15	8.0	10	.96	1.7	.23	4.1	12	4.9	.64	.23	.15	.04
16	5.0	8.2	.92	1.4	.24	3.5	15	3.9	1.7	.20	.15	.05
17	4.0	6.6	.88	1.3	.25	3.6	11	3.4	1.7	.17	.14	.06
18	3.5	5.7	.82	1.2	.27	89	7.6	3.0	1.1	.16	.09	.19
19	3.4	5.2	.78	1.1	.29	47	6.2	2.8	.75	.12	.07	.22
20	3.5	4.7	.76	1.0	.31	19	5.7	3.0	.66	.10	.09	.14
21	3.2	4.2	.72	1.0	.35	16	5.2	2.8	1.2	.08	.16	.13
22	3.0	4.2	.70	.98	.40	45	5.7	2.7	1.0	.17	.18	.11
23	2.8	4.1	.68	1.3	.50	23	5.5	2.3	.75	.18	.16	.10
24	3.2	4.1	2.3	1.0	.62	17	6.0	2.0	.59	.15	.13	.10
25	6.2	3.9	17	.76	.62	13	5.4	1.9	.44	.11	.10	.10
26	6.6	5.4	37	1.0	.60	11	4.9	1.6	.36	.09	.08	.22
27	4.9	15	16	1.0	.52	10	5.5	1.5	.30	.08	.06	.34
28	3.8	13	8.8	.83	.48	9.5	5.5	1.3	.26	.07	.05	.22
29	4.6	8.2	6.0	.60	.45	9.0	42	1.1	.23	.12	.05	.18
30	5.5	6.0	4.9	.50	---	11	61	1.0	.63	.21	.05	.16
31	4.9	---	3.8	.45	---	12	---	.98	---	.11	.05	---
TOTAL	284.2	297.1	135.12	38.14	9.63	436.72	541.8	222.78	42.39	12.06	7.47	2.85
MEAN	9.17	9.90	4.36	1.23	.33	14.1	18.1	7.19	1.41	.39	.24	.095
MAX	41	55	37	3.2	.62	89	75	37	7.2	1.1	1.6	.34
MIN	2.8	3.5	.68	.44	.21	.28	4.9	.98	.23	.07	.05	.02
CFSM	1.85	1.99	.88	.25	.07	2.84	3.64	1.45	.28	.08	.05	.02
IN.	2.13	2.22	1.01	.29	.07	3.27	4.05	1.67	.32	.09	.06	.02

CAL YR 1979 TOTAL 3331.19 MEAN 9.13 MAX 124 MIN .06 CFSM 1.84 IN 24.93
WTR YR 1980 TOTAL 2030.26 MEAN 5.55 MAX 89 MIN .02 CFSM 1.12 IN 15.19

01075800 STEVENS BROOK NEAR WENTWORTH, NH

LOCATION.--Lat 43°50'12", long 71°53'07", Grafton County, Hydrologic Unit 01070001, on left bank 150 ft (46 m) upstream from highway bridge, 0.2 mi (0.3 km) upstream from mouth, and 2.5 mi (4.0 km) southeast of Wentworth.

DRAINAGE AREA.--2.94 mi^2 (7.61 km^2).

PERIOD OF RECORD.--May 1963 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 595 ft (181 m), from topographic map.

REMARKS.--Records good except those for winter period and period of no gage-height record, Feb. 28 to May 6, which are fair, and those below 0.1 ft^3/s (0.003 m^3/s), which are poor. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--17 years, 4.63 ft^3/s (0.131 m^3/s), 21.39 in/yr (543 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,120 ft^3/s (31.7 m^3/s) June 30, 1973, gage height, 6.36 ft (1.939 m), from rating curve extended above 120 ft^3/s (3.4 m^3/s); minimum, 0.01 ft^3/s (<0.001 m^3/s) several days in 1963-65, 1971, 1975, 1977, 1978.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 90 ft^3/s (2.5 m^3/s) and maximums (*):

		Discharge		Gage height				Discharge		Gage height	
Date	Time	(ft^3/s)	(m^3/s)	(ft)	(m)	Date	Time	(ft^3/s)	(m^3/s)	(ft)	(m)
Apr. 10 or 11	--	*113	3.20	unknown							

Minimum discharge, 0.04 ft^3/s (<0.001 m^3/s) Jan. 31, Aug. 27-31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.89	2.3	5.4	.70	.20	.15	2.9	9.0	.34	1.2	.06	.09
2	1.8	2.2	5.0	.62	.19	.15	2.5	7.6	.34	.65	.06	.59
3	13	19	4.1	.55	.18	.14	2.3	6.4	.47	.59	.06	2.0
4	26	13	3.2	.43	.17	.14	2.7	5.8	1.6	.38	.06	.90
5	8.6	7.8	3.3	.37	.16	.14	3.0	5.2	3.3	.26	.08	.38
6	28	6.0	3.4	.34	.15	.15	2.4	2.5	2.0	.23	.53	.26
7	10	5.2	3.5	.33	.15	.15	2.2	5.8	1.2	.20	.20	.20
8	5.8	4.6	3.1	.33	.15	.18	2.0	6.6	.90	.34	.15	.15
9	4.9	4.2	2.6	.33	.14	.25	3.5	6.4	.90	.65	.13	.13
10	5.0	4.6	2.6	.32	.14	.30	12	4.7	.81	.38	.11	.11
11	4.5	4.2	2.4	.32	.14	.38	70	4.3	.65	.30	.09	.11
12	9.0	3.3	2.4	.58	.14	.41	30	3.9	.53	.38	.09	.09
13	14	3.4	2.6	.62	.13	.43	18	3.9	.42	.34	.09	.09
14	8.6	3.7	2.3	.50	.13	.31	15	3.9	.34	.23	.09	.26
15	5.2	3.3	2.0	.48	.13	.29	13	3.7	.30	.20	.09	.26
16	4.2	3.0	2.3	.47	.13	.31	14	3.0	.42	.17	.09	.17
17	3.7	2.7	2.7	.45	.14	.27	10	2.5	.47	.17	.09	.17
18	3.2	2.8	1.8	.45	.14	.70	8.6	2.3	.42	.17	.08	.98
19	2.9	2.6	1.7	.44	.15	3.0	7.8	4.7	.26	.13	.08	1.4
20	2.6	2.4	1.5	.44	.15	2.5	7.2	4.3	.23	.11	.08	.73
21	2.6	2.3	1.4	.40	.16	2.4	6.8	2.8	10	.09	.08	.38
22	2.4	2.2	1.2	.34	.17	3.4	6.4	2.1	5.8	.20	.08	.30
23	2.0	2.2	1.3	.34	.18	3.3	6.0	1.8	2.0	.20	.08	.26
24	3.0	2.1	1.5	.32	.18	3.2	5.8	1.6	.90	.20	.06	.26
25	3.9	2.1	20	.30	.18	3.3	5.6	1.4	.47	.13	.05	.26
26	3.0	4.5	8.0	.30	.18	2.5	6.4	1.4	.34	.09	.05	3.0
27	2.5	18	2.3	.28	.18	2.4	7.2	1.2	.23	.08	.05	2.8
28	2.4	12	1.5	.27	.16	2.6	6.4	1.1	.17	.08	.04	1.2
29	2.6	8.1	1.2	.26	.16	3.2	8.0	.81	.15	.08	.04	.65
30	2.9	6.4	1.0	.24	---	4.0	12	.47	.26	.06	.04	.53
31	2.5	---	.82	.22	---	3.4	---	.38	---	.06	.08	---
TOTAL	191.69	160.2	98.12	12.34	4.56	44.05	299.7	111.56	36.22	8.35	2.96	18.71
MEAN	6.18	5.34	3.17	.40	.16	1.42	9.99	3.60	1.21	.27	.095	.62
MAX	28	19	20	.70	.20	4.0	70	9.0	10	1.2	.53	3.0
MIN	.89	2.1	.82	.22	.13	.14	2.0	.38	.15	.06	.04	.09
CFSM	2.10	1.82	1.08	.14	.05	.48	3.40	1.22	.41	.09	.03	.21
IN.	2.42	2.03	1.24	.16	.06	.56	3.79	1.41	.46	.11	.04	.24

CAL YR 1979 TOTAL 1872.59 MEAN 5.13 MAX 84 MIN .06 CFSM 1.75 IN 23.69
WTR YR 1980 TOTAL 988.46 MEAN 2.70 MAX 70 MIN .04 CFSM .92 IN 12.50

01076500 PEMIGEWASSET RIVER AT PLYMOUTH, NH

LOCATION.--Lat 43°45'33", long 71°41'10", Grafton County, Hydrologic Unit 01070001, on right bank 150 ft (46 m) downstream from bridge at Plymouth and 0.3 mi (0.5 km) downstream from Baker River.

DRAINAGE AREA.--622 mi^2 (1,611 km^2).

PERIOD OF RECORD.--Discharge: October 1903 to current year. Records for April 1886 to September 1903, published in WSP 124, are unreliable and should not be used.

Water-quality records: Water years 1953, 1967-74, 1976-79.

REVISED RECORDS.--WSP 471: 1912-14. WSP 726: Drainage area. WSP 1231: 1904-11, 1913-14, 1917-18, 1919(M), 1920-25, 1926-27(M), 1929-31(M). WSP 1721: 1959(M). See also PERIOD OF RECORD.

GAGE.--Water-stage recorder. Datum of gage is 457.07 ft (139.315 m) National Geodetic Vertical Datum of 1929. Prior to Jan. 1, 1910, nonrecording gage at sites 150 ft (46 m) and 200 ft (60 m) upstream at present datum or datum 1.11 ft (0.338 m) lower. Jan. 1, 1910, to Sept. 30, 1926, nonrecording gage at site 200 ft (60 m) upstream at present datum.

REMARKS.--Records fair. Some diurnal fluctuation during period 1940-52 caused by powerplants upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--77 years, 1,355 ft^3/s (38.37 m^3/s), 29.58 in/yr (751 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 65,400 ft^3/s (1,850 m^3/s) Mar. 19, 1936, gage height, 29.0 ft (8.84 m), from floodmarks, from rating curve extended above 43,000 ft^3/s (1,220 m^3/s) on basis of computations of flow over dam at gage heights 23.0 ft (7.01 m), 27.4 ft (8.35 m), and 29.0 ft (8.84 m); minimum, 39 ft^3/s (1.10 m^3/s) Oct. 1, 3, 4, 1948; minimum daily, 45 ft^3/s (1.27 m^3/s) Sept. 20, 1923.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 12,600 ft^3/s (357 m^3/s) and maximums (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Nov. 27	0900	14900	422	10.29	3.136	Apr. 10	1230	*22000	623	*13.22	4.029

Minimum discharge not determined; minimum daily, 160 ft^3/s (4.53 m^3/s) Mar. 6, 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	341	673	1800	730	300	200	2050	3160	569	736	285	291
2	483	647	1300	660	290	190	1980	2770	562	546	256	285
3	525	1780	1100	600	280	180	1680	2340	676	524	262	659
4	2590	2800	1000	550	280	180	1950	2130	1160	437	262	509
5	1370	1520	940	500	270	170	1690	1750	1450	365	256	339
6	4210	1140	890	500	260	160	1350	1600	1090	345	297	285
7	2730	995	860	500	250	160	1290	2050	834	326	320	250
8	1440	896	820	490	250	220	1360	2240	736	308	256	211
9	1080	810	780	480	240	330	1530	1990	825	384	245	192
10	895	805	760	460	230	290	17400	1760	736	345	233	187
11	879	949	750	520	230	240	10200	1600	659	291	216	183
12	827	949	720	900	220	290	5430	1650	592	314	201	178
13	1910	897	700	1150	210	300	4710	1600	539	302	239	174
14	1610	853	660	950	210	270	4200	1620	494	279	256	245
15	1120	810	620	850	200	260	6390	1460	450	256	222	936
16	986	789	600	780	200	250	6020	1290	494	250	211	642
17	869	763	560	730	200	270	3090	1180	509	256	196	423
18	801	743	540	690	190	400	2340	1100	430	262	196	642
19	827	727	530	640	190	2500	1990	2640	391	239	192	754
20	764	705	530	550	190	1600	1880	2200	365	205	240	509
21	758	693	530	470	190	1400	2480	1650	684	201	262	417
22	732	679	540	440	200	1100	2190	1420	1120	222	222	384
23	700	685	560	420	200	1500	1780	1240	710	297	201	345
24	810	710	700	400	210	1600	1740	1110	577	314	187	308
25	1440	721	3370	380	210	1700	2000	1010	472	279	178	268
26	967	1130	4580	370	210	1500	3390	908	404	268	174	633
27	800	10200	2060	350	210	1400	3180	825	358	256	174	1090
28	736	4970	1250	340	210	1700	2590	745	326	250	174	676
29	748	3000	1020	330	205	2070	2450	684	302	250	174	494
30	768	2100	874	320	---	2930	4330	633	291	262	174	410
31	720	---	780	310	---	2290	---	585	---	285	205	---
TOTAL	35436	45139	32724	17360	6535	27650	104660	48940	18805	9854	6966	12919
MEAN	1143	1505	1056	560	225	892	3489	1579	627	318	225	431
MAX	4210	10200	4580	1150	300	2930	17400	3160	1450	736	320	1090
MIN	341	647	530	310	190	160	1290	585	291	201	174	174
CFSM	1.84	2.42	1.70	.90	.36	1.43	5.61	2.54	1.01	.51	.36	.69
IN.	2.12	2.70	1.96	1.04	.39	1.65	6.26	2.93	1.12	.59	.42	.77

CAL YR 1979 TOTAL 565133 MEAN 1548 MAX 17800 MIN 170 CFSM 2.49 IN 33.80
WTR YR 1980 TOTAL 366988 MEAN 1003 MAX 17400 MIN 160 CFSM 1.61 IN 21.95

01077000 SQUAM RIVER AT ASHLAND, NH

LOCATION.--Lat 43°42'19", long 71°37'49", Grafton County, Hydrologic Unit 01070001, on right bank 200 ft (60 m) upstream from highway bridge, 0.7 mi (1.1 km) north of Ashland, and 1.4 mi (2.3 km) downstream from Little Squam Lake.

DRAINAGE AREA.--57.6 mi^2 (149.2 km^2).

PERIOD OF RECORD.-Discharge: August 1939 to current year.
Water-quality records: Water year 1957.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 545 ft (166 m), from topographic map.

REMARKS.--Records good except those below 20 ft^3/s (0.57 m^3/s), which are fair. Flow completely regulated by Squam and Little Squam Lakes. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--41 years, 88.0 ft^3/s (2.492 m^3/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,090 ft^3/s (30.9 m^3/s) July 4, 1973, gage height, 14.29 ft (4.356 m); minimum daily, 1.0 ft^3/s (0.029 m^3/s) July 4-7, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 120 ft^3/s (3.40 m^3/s) Oct. 6, gage height, 10.67 ft (3.252 m); minimum daily, 3.8 ft^3/s (0.11 m^3/s) June 28-30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	61	92	91	111	60	57	45	60	60	5.2	6.7	6.0
2	61	92	91	111	60	57	45	60	60	6.4	6.9	6.2
3	61	92	91	111	60	57	46	60	60	6.0	6.8	6.1
4	61	92	91	111	60	57	47	60	60	6.0	6.8	6.0
5	89	92	103	111	60	56	48	60	60	6.0	7.3	6.0
6	118	92	113	111	60	56	48	60	60	5.9	7.3	6.0
7	117	92	113	111	59	56	48	61	60	5.6	7.5	6.0
8	117	92	113	111	59	56	48	61	60	5.8	7.4	6.0
9	117	92	111	111	59	56	48	61	59	5.6	7.3	5.9
10	105	92	111	111	59	56	53	61	59	5.6	6.9	5.6
11	94	92	111	111	59	56	51	61	59	8.8	7.2	5.6
12	94	92	111	111	59	56	50	61	59	11	7.4	5.7
13	94	92	111	111	59	56	50	78	59	11	7.0	6.0
14	94	91	111	110	59	56	50	92	59	11	6.9	6.0
15	94	91	111	109	59	56	52	92	59	7.9	6.9	5.6
16	94	91	111	84	59	56	52	76	59	6.0	6.5	5.6
17	94	91	111	61	59	56	52	60	59	5.9	6.0	5.6
18	94	91	111	61	59	57	52	60	58	5.9	6.0	6.0
19	94	91	111	61	59	56	52	60	58	6.1	6.0	7.0
20	94	91	111	61	59	57	53	60	58	6.3	5.7	7.4
21	94	91	111	61	59	56	60	60	58	6.5	5.6	7.9
22	94	91	111	61	57	56	60	60	58	6.5	5.7	9.0
23	94	91	111	61	57	57	60	60	59	6.6	6.0	9.0
24	94	91	111	60	57	57	60	60	59	6.6	6.0	9.0
25	94	91	112	60	57	49	60	60	59	6.5	5.6	9.0
26	93	92	113	60	57	44	60	60	36	6.5	5.6	9.0
27	92	93	112	60	59	44	60	60	4.0	6.5	5.6	8.4
28	92	92	111	60	57	45	60	60	3.8	6.8	5.6	8.4
29	92	92	111	60	56	45	60	60	3.8	6.9	5.7	8.4
30	92	91	111	60	---	45	60	60	3.8	6.9	5.8	6.3
31	92	---	111	60	---	45	---	60	---	6.9	6.0	---
TOTAL	2870	2748	3363	2653	1702	1669	1590	1964	1529.4	211.2	199.7	204.7
MEAN	92.6	91.6	108	85.6	58.7	53.8	53.0	63.4	51.0	6.81	6.44	6.82
MAX	118	93	113	111	60	57	60	92	60	11	7.5	9.0
MIN	61	91	91	60	56	44	45	60	3.8	5.2	5.6	5.6

CAL YR 1979 TOTAL 33738.8 MEAN 92.4 MAX 461 MIN 4.8
WTR YR 1980 TOTAL 20704.0 MEAN 56.6 MAX 118 MIN 3.8

01078000 SMITH RIVER NEAR BRISTOL, NH

LOCATION.--Lat 43°34'04", long 71°44'54", Merrimack County, Hydrologic Unit 01070001, on right bank in Hill, 1.5 mi (2.4 km) upstream from mouth, and 1.8 mi (2.9 km) southwest of Bristol.

DRAINAGE AREA.--85.8 mi^2 (222.2 km^2).

PERIOD OF RECORD.--Discharge: May 1918 to current year.
Water quality records: Water years 1957, 1976-79.

REVISED RECORDS.--WSP 711: Drainage area. WSP 781: 1934. WSP 1231: 1919, 1920-21(M), 1922-31, 1932-33(M), 1941-43.

GAGE.--Water-stage recorder. Datum of gage is 449.80 ft (137.099 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Nov. 25, 1933, nonrecording gage at site 1.5 mi (2.4 km) upstream at different datum.

REMARKS.--Records good except those for winter period, which are fair. Prior to 1954, some diurnal fluctuation caused by small mill upstream; greater fluctuation prior to 1941. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--62 years, 143 ft^3/s (4.050 m^3/s), 22.63 in/yr (575 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,100 ft^3/s (229 m^3/s) Mar. 19, 1936, gage height, 16.09 ft (4.904 m), from floodmarks, from rating curve extended above 2,700 ft^3/s (76 m^3/s) on basis of contracted-opening measurement of peak flow; minimum daily, 2.7 ft^3/s (0.076 m^3/s) Aug. 2, 1933.
Maximum stage since at least 1885, that of Mar. 19, 1936.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,150 ft^3/s (32.6 m^3/s) and maximum (*):

Date	Time	Discharge		Gage height		Date	Time	Discharge		Gage height	
		(ft^3/s)	(m^3/s)	(ft)	(m)			(ft^3/s)	(m^3/s)	(ft)	(m)
Apr. 11	0130	*1850	52.4	6.87	2.094						

Minimum discharge, 7.2 ft^3/s (0.20 m^3/s) Aug. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40	55	119	91	26	20	360	276	35	37	18	11
2	179	53	104	80	25	20	342	229	37	35	33	18
3	179	116	92	66	23	19	297	199	90	31	26	101
4	451	218	82	54	22	19	342	170	289	26	23	59
5	314	159	79	50	21	19	410	147	204	23	19	37
6	476	120	76	44	20	19	326	135	124	22	19	28
7	258	101	86	42	19	20	280	152	85	18	16	23
8	156	91	84	40	19	22	273	199	70	22	15	19
9	130	81	74	39	19	32	262	201	64	29	15	16
10	135	94	66	38	19	34	1420	184	56	30	13	14
11	118	113	65	37	18	39	1630	157	50	25	16	12
12	114	100	64	76	18	48	1040	147	47	23	21	11
13	214	87	62	83	18	54	653	134	44	22	22	9.8
14	184	88	56	67	17	35	442	131	39	20	21	12
15	136	87	54	64	17	34	415	117	35	18	21	13
16	114	78	55	63	17	34	421	104	43	19	18	12
17	100	71	56	59	18	30	321	92	50	17	16	12
18	88	75	52	58	19	50	257	88	40	16	14	20
19	81	70	49	58	19	295	223	115	33	16	14	20
20	76	65	48	58	20	250	203	110	31	15	14	19
21	71	62	47	52	21	225	198	91	61	15	13	17
22	67	59	46	45	22	250	189	80	67	14	13	15
23	63	58	49	45	23	300	174	71	51	14	12	14
24	64	57	56	43	23	270	164	63	39	14	10	12
25	79	57	268	39	23	250	157	58	32	13	10	12
26	73	112	499	39	24	270	182	53	28	13	9.5	29
27	64	391	319	37	23	306	205	49	24	12	8.9	37
28	60	283	194	35	22	326	191	52	22	12	8.6	31
29	62	188	160	34	21	396	280	44	20	12	8.1	24
30	62	143	132	32	---	541	369	40	25	16	7.4	20
31	59	---	100	29	---	479	---	37	---	15	14	---
TOTAL	4267	3332	3293	1597	596	4706	12026	3725	1835	614	488.5	677.8
MEAN	138	111	106	51.5	20.6	152	401	120	61.2	19.8	15.8	22.6
MAX	476	391	499	91	26	541	1630	276	289	37	33	101
MIN	40	53	46	29	17	19	157	37	20	12	7.4	9.8
CFSM	1.61	1.29	1.24	.60	.24	1.77	4.67	1.40	.71	.23	.18	.26
IN.	1.85	1.44	1.43	.69	.26	2.04	5.21	1.62	.80	.27	.21	.29

CAL YR 1979 TOTAL 59824.0 MEAN 164 MAX 1780 MIN 12 CFSM 1.91 IN 25.94
WTR YR 1980 TOTAL 37157.3 MEAN 102 MAX 1630 MIN 7.4 CFSM 1.19 IN 16.11

01079600 POORFARM BROOK NEAR GILFORD, NH

LOCATION.--Lat 43°33'19", long 71°21'52", Belknap County, Hydrologic Unit 01070002, on right bank 10 ft (3 m) upstream from bridge on State Highway 11A, 1.5 mi (2.4 km) upstream from mouth, and 3 mi (5 km) east of Gilford.

DRAINAGE AREA.--5.00 mi^2 (12.95 km^2).

PERIOD OF RECORD.--March 1978 to September 1980 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is 820 ft (250 m), from topographic map.

REMARKS.--Records good except those for winter period, which are fair. Several observations of water temperature and specific conductance were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 1,050 ft^3/s (29.7 m^3/s) Apr. 10, 1980, gage height, 5.19 ft (1.582 m), from rating curve extended above 50 ft^3/s (1.4 m^3/s); minimum, 0.08 ft^3/s (0.002 m^3/s) Aug. 9, 10, 1979.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 100 ft^3/s (2.8 m^3/s) and maximums(*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 4	0100	a135	3.82	2.88	0.878	Mar. 18	1515	a225	6.37	b3.70	1.128
Dec. 25	1745	a123	3.48	2.82	.860	Apr. 10	0515	a*1050	29.7	5.19	1.582
Mar. 11	0800	a110	3.12	b3.26	.994						

a From rating curve extended as explained above.
b Ice Jam.

Minimum discharge, 0.09 ft^3/s (0.003 m^3/s) Aug. 29, 30, Sept. 9-14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.9	6.0	9.0	6.6	1.4	.80	17	28	1.8	3.9	3.3	.46
2	24	5.7	7.4	5.8	1.4	.78	16	24	1.9	2.4	2.3	.42
3	16	31	6.6	5.2	1.3	.78	16	20	6.7	2.0	1.2	1.6
4	53	26	7.0	4.8	1.3	.78	25	16	3.9	1.4	1.0	.63
5	15	16	6.2	4.3	1.2	.83	29	14	2.8	1.0	.65	.45
6	11	13	6.0	3.9	1.2	.84	20	13	2.1	.91	.42	.37
7	10	11	5.8	3.7	1.2	.84	17	12	2.0	.75	.40	.28
8	7.8	10	5.7	3.5	1.1	1.2	15	14	2.0	.94	.27	.22
9	8.7	9.2	5.6	3.4	1.1	3.9	16	14	1.9	1.5	.28	.16
10	11	9.7	5.7	3.3	1.1	3.0	304	12	1.7	1.1	.28	.18
11	11	11	5.7	3.7	1.1	65	58	10	1.5	.80	.43	.12
12	13	11	5.7	4.5	1.1	32	32	9.8	1.4	.72	.61	.09
13	26	9.8	5.7	5.8	1.0	3.9	27	9.0	1.2	.67	.57	.09
14	16	9.4	5.2	4.1	1.0	1.7	22	8.5	1.0	.50	.47	.24
15	12	9.2	4.8	3.6	1.0	1.5	35	7.6	1.1	.39	.37	.60
16	10	8.0	4.6	3.3	1.0	1.4	30	6.7	1.5	.33	.29	.47
17	8.5	7.1	4.5	3.0	1.0	1.4	20	6.4	1.1	.32	.23	.30
18	8.0	7.0	4.4	2.7	1.0	140	17	5.3	.80	.27	.16	1.8
19	7.1	6.4	4.3	2.5	1.1	107	15	6.7	.66	.21	.20	.86
20	6.8	6.4	4.2	2.3	1.1	32	13	6.0	4.6	.16	.35	.61
21	6.4	5.8	4.2	2.1	1.2	10	13	4.9	11	.16	.41	.55
22	5.7	5.7	4.2	2.0	1.2	14	11	4.6	3.8	.34	.40	.37
23	5.2	5.5	4.5	2.2	1.3	16	11	3.8	2.2	.37	.33	.23
24	9.3	5.4	5.1	2.2	1.4	19	10	3.4	1.6	.31	.26	.16
25	12	5.1	54	2.2	1.5	17	9.3	3.0	1.1	.23	.25	.15
26	8.0	11	37	2.5	1.2	13	9.5	2.7	.66	.17	.20	3.8
27	7.3	38	22	2.2	1.0	16	10	2.5	.51	.16	.16	2.7
28	6.4	20	14	1.9	.95	18	10	2.0	.46	.15	.16	1.4
29	8.0	14	11	1.7	.90	22	41	1.9	.46	.24	.14	.80
30	7.3	11	9.0	1.6	---	34	45	1.8	1.3	.46	.11	.66
31	6.4	---	7.6	1.5	---	23	---	1.8	---	.23	1.0	---
TOTAL	362.8	344.4	286.7	102.1	33.35	601.65	913.8	275.4	64.75	23.09	17.20	20.77
MEAN	11.7	11.5	9.25	3.29	1.15	19.4	30.5	8.88	2.16	.74	.55	.69
MAX	53	38	54	6.6	1.5	140	304	28	11	3.9	3.3	3.8
MIN	5.2	5.1	4.2	1.5	.90	.78	9.3	1.8	.46	.15	.11	.09
CFSM	2.34	2.30	1.85	.66	.23	3.88	6.10	1.78	.43	.15	.11	.14
IN.	2.70	2.56	2.13	.76	.25	4.48	6.80	2.05	.48	.17	.13	.15

CAL YR 1979 TOTAL 4928.60 MEAN 13.5 MAX 185 MIN .11 CFSM 2.70 IN 36.65
WTR YR 1980 TOTAL 3046.01 MEAN 8.32 MAX 304 MIN .09 CFSM 1.66 IN 22.66

01080000 LAKE WINNIPESAUKEE AT WEIRS BEACH, NH

LOCATION.--Lat 43°36'27", long 71°27'30", Belknap County, Hydrologic Unit 01070002, 1,300 ft (400 m) north of highway bridge at Weirs Beach.

DRAINAGE AREA.--363 mi^2 (940 km^2) at outlet at Lakeport.

PERIOD OF RECORD.--Gage heights: September 1933 to current year. Prior to November 1937, monthend contents only, published in WSP 1301. Prior to October 1970, published as "at The Weirs."

REVISED RECORDS.--WDR NH-VT-78-1: 1938-77 (datum correction).

GAGE.--Water-stage recorder. Datum of gage is 499.92 ft (152.376 m) National Geodetic Vertical Datum of 1929. Prior to November 1937, nonrecording gage at lake outlet at Lakeport at datum 0.63 ft (0.192 m), corrected, higher. Nov. 24, 1937 to Nov. 7, 1965, water-stage recorder at site 500 ft (150 m) south at present datum.

REMARKS.--Lake used for recreation and conservation for development of water power. Usable capacity, 7,220,000,000 ft^3 (204,000,000 m^3) between elevations 500.65 ft (152.598 m) and 504.32 ft (153.717 m) National Geodetic Vertical Datum of 1929. Stage regulated at outlet and by Wentworth, Merrymeeting (Reservoirs in Merrimack River basin), and other lakes. Contents given herein are computed from gage height at 2400 on last day of month, eliminating the effect of seiche and wind action.

Capacity table (gage height, in feet, and contents, in millions of cubic feet)

2.0	13,880
3.0	15,840
4.0	17,840
5.0	19,850

EXTREMES FOR PERIOD OF RECORD.--Maximum daily gage height, 5.86 ft (1.786 m) May 22, 23, 1954; minimum daily, 0.63 ft (0.192 m) Dec. 11, 1941.

EXTREMES FOR CURRENT YEAR.--Maximum daily gage height, 4.45 ft (1.3564 m) Apr. 16; minimum daily, 2.87 ft (0.875 m) Mar. 6, 7.

MEAN GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.44	3.62	3.78	3.32	3.04	2.89	3.61	4.44	4.24	4.14	3.95	3.58
2	3.53	3.62	3.75	3.32	3.02	2.89	3.63	4.44	4.25	4.13	4.00	3.60
3	3.55	3.70	3.71	3.29	3.02	2.88	3.65	4.42	4.27	4.13	3.99	3.70
4	3.62	3.75	3.70	3.30	3.02	2.88	3.72	4.38	4.27	4.11	3.99	3.70
5	3.63	3.76	3.68	3.30	3.01	2.88	3.75	4.37	4.26	4.10	3.98	3.67
6	3.63	3.77	3.67	3.30	3.00	2.87	3.78	4.36	4.26	4.07	3.97	3.66
7	3.64	3.78	3.67	3.31	3.00	2.87	3.80	4.38	4.25	4.04	3.94	3.62
8	3.56	3.80	3.61	3.28	2.98	2.92	3.81	4.39	4.23	4.07	3.93	3.58
9	3.60	3.80	3.62	3.27	2.98	2.94	3.84	4.38	4.18	4.05	3.87	3.56
10	3.61	3.84	3.59	3.26	2.97	2.95	4.10	4.39	4.18	4.05	3.85	3.53
11	3.61	3.85	3.58	3.25	2.96	3.03	4.23	4.40	4.16	4.04	3.87	3.49
12	3.64	3.87	3.55	3.27	2.95	3.03	4.30	4.41	4.15	4.02	3.86	3.46
13	3.65	3.89	3.54	3.27	2.95	3.03	4.35	4.42	4.14	3.99	3.83	3.45
14	3.63	3.88	3.54	3.26	2.94	3.06	4.38	4.42	4.15	3.99	3.81	3.44
15	3.62	3.87	3.55	3.25	2.93	3.06	4.43	4.42	4.12	3.98	3.80	3.45
16	3.61	3.85	3.56	3.23	2.94	3.06	4.45	4.42	4.11	3.97	3.75	3.45
17	3.62	3.84	3.52	3.22	2.95	3.07	4.43	4.43	4.11	3.97	3.73	3.43
18	3.61	3.82	3.51	3.20	2.95	3.18	4.44	4.42	4.10	3.96	3.73	3.45
19	3.61	3.82	3.49	3.19	2.95	3.23	4.42	4.43	4.10	3.95	3.72	3.44
20	3.61	3.81	3.44	3.15	2.94	3.26	4.38	4.44	4.09	3.94	3.72	3.42
21	3.61	3.79	3.41	3.13	2.92	3.30	4.38	4.44	4.14	3.93	3.70	3.41
22	3.20	3.79	3.37	3.13	2.92	3.32	4.36	4.38	4.15	3.93	3.67	3.40
23	3.62	3.79	3.35	3.14	2.94	3.35	4.35	4.38	4.15	3.93	3.66	3.37
24	3.64	3.77	3.33	3.13	2.94	3.39	4.35	4.38	4.13	3.91	3.64	3.34
25	3.64	3.77	3.45	3.10	2.93	3.41	4.34	4.35	4.12	3.90	3.63	3.34
26	3.65	3.81	3.43	3.09	2.92	3.43	4.35	4.32	4.12	3.88	3.61	3.38
27	3.63	3.81	3.39	3.08	2.92	3.45	4.34	4.29	4.08	3.90	3.60	3.32
28	3.64	3.81	3.36	3.08	2.91	3.49	4.34	4.28	4.06	3.92	3.58	3.31
29	3.63	3.79	3.37	3.07	2.88	3.51	4.39	4.27	4.07	3.92	3.57	3.29
30	3.62	3.79	3.33	3.05	---	3.56	4.44	4.27	4.10	3.91	3.55	3.26
31	3.62	---	3.30	3.05	---	3.60	---	4.25	---	3.88	3.58	---
MEAN	3.60	3.80	3.52	3.20	2.96	3.15	4.17	4.38	4.16	3.99	3.78	3.47
MAX	3.65	3.89	3.78	3.32	3.04	3.60	4.45	4.44	4.27	4.14	4.00	3.70
MIN	3.20	3.62	3.30	3.05	2.88	2.87	3.61	4.25	4.06	3.88	3.55	3.26
(†)	17080	17420	16440	15940	15810	17040	18680	18340	18120	17620	17000	16340
(‡)	+164	+131	-366	-187	-51.9	+459	+633	-127	-84.9	-187	-231	-254

CAL YR 1979 MEAN 3.64 MAX 4.93 MIN 2.39 (†) +58.8
WTR YR 1980 MEAN 3.68 MAX 4.45 MIN 2.87 (‡) -9.49

† Contents, in millions of cubic feet at 2400 on last day of month.
‡ Change in contents, equivalent in cubic feet per second.

01080500 LAKE WINNIPESAUKEE OUTLET AT LAKEPORT, NH

LOCATION.--Lat 43°32'57", long 71°27'54", Belknap County, Hydrologic Unit 01070002, 100 ft (30 m) upstream from highway bridge across Paugus Bay at Lakeport.

DRAINAGE AREA.--363 mi^2 (940 km^2).

PERIOD OF RECORD.--Discharge: January 1860 to December 1911 (monthly gage heights only, published in WSP 301), June 1933 to current year.
Water-quality records: Water years 1954-55.

GAGE.--Water-stage recorder, Keeler deflection meter, and measuring flume. Datum of gage is 500.55 ft (152.568 m) National Geodetic Vertical Datum of 1929. January 1860 to December 1911, nonrecording gage at site 150 ft (46 m) downstream at same datum. June 1, 1933, to Sept. 30, 1936, nonrecording gage and continuous-recording current meter at present site and datum. Oct. 1, 1936, to May 23, 1944, discharge computed from flow over spillway and through gates and wheels at site 150 ft (46 m) downstream.

REMARKS.--Records good. Flow completely regulated by Winnipesaukee (station 01080000), Wentworth, Merrymeeting (Reservoirs in Merrimack River basin), and other lakes. Daily discharge computed from relation between discharge, stage, and deflection of vane in measuring flume. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--47 years, 532 ft^3/s (15.07 m^3/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 2,890 ft^3/s (81.8 m^3/s) Mar. 31, 1936; no flow Sept. 29, 1962.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 1,290 ft^3/s (36.5 m^3/s) Apr. 15; minimum daily, 250 ft^3/s (7.08 m^3/s) Oct. 1 to Nov. 15, Dec. 14-16, Jan. 5-6, Feb. 9-12, Aug. 2 to Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	250	250	550	320	310	260	270	1070	305	285	260	250
2	250	250	550	320	280	260	270	1070	305	295	250	250
3	250	250	690	300	275	260	270	1090	305	295	250	250
4	250	250	770	300	275	260	275	1090	305	295	250	250
5	250	250	770	250	275	260	285	835	305	300	250	250
6	250	250	770	250	275	275	290	680	305	300	250	250
7	250	250	780	445	275	285	290	680	305	300	250	250
8	250	250	770	550	275	280	290	680	305	300	250	250
9	250	250	770	550	250	280	290	510	300	290	250	250
10	250	250	770	550	250	280	300	335	300	280	250	250
11	250	250	780	550	250	285	715	335	300	280	250	250
12	250	250	780	560	250	290	845	335	300	280	250	250
13	250	250	490	560	265	290	845	345	300	280	250	250
14	250	250	250	560	290	295	1100	335	300	280	250	250
15	250	250	250	560	285	290	1290	345	300	280	250	250
16	250	450	250	560	290	290	1280	350	300	280	250	250
17	250	550	710	560	290	295	1280	335	300	280	250	250
18	250	550	980	555	290	290	1280	335	300	280	250	250
19	250	550	970	555	290	290	1230	340	300	280	250	250
20	250	550	970	555	290	290	1220	340	300	280	250	250
21	250	550	960	555	290	290	1220	340	300	280	250	250
22	250	560	940	555	290	280	1000	335	300	280	250	250
23	250	560	940	555	290	280	870	340	300	280	250	250
24	250	540	930	555	290	280	870	325	300	280	250	250
25	250	540	910	400	290	280	850	325	300	280	250	250
26	250	540	930	265	290	280	825	350	300	260	250	250
27	250	540	930	275	290	280	825	340	300	260	250	250
28	250	590	930	285	290	280	825	330	300	260	250	250
29	250	550	930	290	285	270	825	305	300	260	250	250
30	250	560	930	290	---	270	1000	305	300	260	250	250
31	250	---	560	300	---	270	---	305	---	260	250	---
TOTAL	7750	11930	23510	13735	8135	8665	23025	15035	9040	8700	7760	7500
MEAN	250	398	758	443	281	280	768	485	301	281	250	250
MAX	250	590	980	560	310	295	1290	1090	305	300	260	250
MIN	250	250	250	250	250	260	270	305	300	260	250	250

CAL YR 1979 TOTAL 208275 MEAN 571 MAX 1770 MIN 240
WTR YR 1980 TOTAL 144785 MEAN 396 MAX 1290 MIN 250

01081000 WINNIPESAUKEE RIVER AT TILTON, NH

LOCATION.--Lat 43°26'31", long 71°35'20", Belknap County, Hydrologic Unit 01070002, on right bank at Tilton and 0.3 mi (0.5 km) upstream from Packer Brook.

DRAINAGE AREA.--471 mi^2 (1,220 km^2).

PERIOD OF RECORD.--Discharge: January 1937 to current year.
Water-quality records: Water year 1953.

REVISED RECORDS.--WSP 1901: 1960.

GAGE.--Water-stage recorder. Datum of gage is 441.87 ft (134.682 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for periods of no gage-height record, Mar. 30 to Apr. 17, Apr. 21 to July 2, which are fair. Flow regulated by powerplants prior to 1967 and by Winnipesaukee (station 01080000), Winnisquam 4.5 mi (7.2 km) upstream, Wentworth, Merrymeeting (Reservoirs in Merrimack River basin), and other lakes upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--43 years, 699 ft^3/s (19.80 m^3/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,810 ft^3/s (108 m^3/s) Sept. 21, 1938, gage height, 7.90 ft (2.408 m); maximum gage height, 7.93 ft (2.417 m) Mar. 27, 1953; minimum daily discharge, 48 ft^3/s (1.36 m^3/s) Aug. 31, 1941.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,930 ft^3/s (54.7 m^3/s) Apr. 16, gage height, 5.71 ft (1.740 m), from peak-stage indicator; minimum daily, 239 ft^3/s (6.77 m^3/s) Nov. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	329	285	683	762	305	295	631	1230	361	373	304	293
2	425	275	682	657	310	295	582	1220	365	382	350	289
3	501	375	688	606	310	290	445	1220	382	362	344	319
4	638	433	833	564	310	286	445	1230	478	351	336	318
5	559	354	867	526	301	287	538	1200	474	345	325	305
6	528	254	878	494	300	288	538	984	433	348	317	296
7	495	239	904	508	300	291	508	916	407	340	309	288
8	455	353	915	595	295	316	495	906	390	324	300	271
9	449	394	910	607	296	364	521	874	394	332	292	256
10	468	411	898	608	297	380	874	772	382	340	285	249
11	452	425	895	609	296	508	1290	654	369	332	289	241
12	509	424	895	673	294	533	1320	586	356	320	301	241
13	705	413	832	683	292	489	1320	568	352	312	295	260
14	665	395	624	665	292	460	1350	564	348	308	288	275
15	664	386	558	660	289	431	1680	551	348	300	282	285
16	814	376	529	661	294	429	1910	521	365	300	276	275
17	875	373	629	655	290	396	1870	478	373	312	268	265
18	827	375	908	647	300	666	1800	474	356	312	257	288
19	734	388	1010	648	300	809	1760	499	352	308	255	285
20	640	410	1040	646	300	687	1720	508	361	300	268	276
21	577	437	1070	638	297	701	1700	478	449	296	271	270
22	529	463	1140	634	293	833	1650	369	421	299	265	267
23	491	491	1160	638	309	797	1410	340	382	303	261	265
24	479	515	1160	633	300	773	1300	348	365	299	259	258
25	483	537	1330	608	300	742	1240	356	356	296	262	249
26	454	587	1500	448	300	694	1220	361	352	295	259	296
27	426	700	1480	419	300	675	1200	356	340	295	258	304
28	404	754	1450	400	300	655	1190	356	336	294	259	287
29	396	709	1410	380	300	645	1190	356	328	294	257	277
30	375	683	1360	330	---	654	1230	356	332	299	255	276
31	339	---	1200	310	---	640	---	361	---	294	287	---
TOTAL	16685	13214	30438	17912	8670	16309	34927	19992	11307	9865	8834	8324
MEAN	538	440	982	578	299	526	1164	645	377	318	285	277
MAX	875	754	1500	762	310	833	1910	1230	478	382	350	319
MIN	329	239	529	310	289	286	445	340	328	294	255	241

CAL YR 1979 TOTAL 285217 MEAN 781 MAX 2710 MIN 239
WTR YR 1980 TOTAL 196477 MEAN 537 MAX 1910 MIN 239

01083000 NUBANUSIT BROOK NEAR PETERBOROUGH, NH

LOCATION.--Lat 42°53'10", long 71°58'24", Hillsborough County, Hydrologic Unit 01070003, on left bank 1.2 mi (1.9 km) downstream from Edward MacDowell Reservoir, 1.3 mi (2.1 km) northwest of Peterborough, and 1.5 mi (2.4 km) upstream from mouth.

DRAINAGE AREA.--46.9 mi^2 (121.5 km^2).

PERIOD OF RECORD.--October 1920 to September 1931, July 1945 to current year. Monthly discharge only October 1920, published in WSP 1301.

REVISED RECORDS.--WSP 561: 1921(M). WSP 1051: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 790 ft (241 m), from topographic map. Prior to Oct. 1, 1931, at site 550 ft (170 m) downstream at different datum.

REMARKS.--Records good except those for winter period, which are fair. Flow regulated by mills and Nubanusit Lake, Edward MacDowell Reservoir since 1950 (Reservoirs in Merrimack River basin), and other reservoirs upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--46 years, 83.9 ft^3/s (2.376 m^3/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,130 ft^3/s (32.0 m^3/s) Apr. 11, 1931, gage height, 5.59 ft (1.704 m), site and datum then in use, from rating curve extended above 380 ft^3/s (11 m^3/s); minimum daily, 0.5 ft^3/s (0.014 m^3/s) Aug. 1, 1926. Maximum discharge since construction of Edward MacDowell Reservoir in 1950, 699 ft^3/s (19.8 m^3/s) Apr. 12, 1960, gage height, 4.54 ft (1.384 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 583 ft^3/s (16.5 m^3/s) Mar. 26, gage height, 4.08 ft (1.244 m); minimum daily, 4.2 ft^3/s (0.12 m^3/s) Aug. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	66	51	163	72	45	37	280	244	20	54	4.5	5.8
2	105	58	87	72	45	30	265	230	13	59	4.5	5.8
3	187	95	65	72	36	27	250	191	15	44	4.5	5.8
4	233	127	81	72	32	29	231	155	30	26	4.4	5.6
5	285	172	93	72	25	29	211	104	43	17	4.4	5.6
6	289	181	93	72	25	48	210	80	42	17	4.4	5.6
7	233	133	109	65	35	59	184	91	36	17	11	5.4
8	184	111	117	51	40	64	155	135	32	18	24	5.4
9	169	100	117	63	40	65	133	153	32	29	23	6.3
10	148	103	85	64	40	88	72	129	32	36	12	16
11	136	103	76	65	26	130	206	88	32	24	6.4	17
12	127	121	72	92	30	145	464	75	32	16	6.4	17
13	166	113	72	126	46	140	488	75	32	16	6.4	17
14	172	100	82	90	60	108	437	95	31	16	6.4	13
15	136	100	87	63	60	70	397	95	20	16	6.4	9.2
16	120	101	73	63	45	50	488	70	22	16	6.4	8.5
17	105	100	78	63	25	40	466	51	35	16	6.3	8.5
18	101	100	80	63	25	55	377	50	40	16	5.9	26
19	101	89	107	63	32	150	231	51	43	12	4.4	43
20	88	66	115	58	32	316	148	51	43	8.5	5.2	26
21	67	57	90	48	32	351	129	51	33	8.2	5.8	22
22	45	66	59	48	32	75	116	50	26	8.2	5.9	38
23	45	81	59	48	45	164	108	41	22	8.2	5.9	37
24	45	78	60	48	40	355	108	35	18	7.9	5.8	36
25	49	61	107	48	36	535	91	36	15	6.2	6.3	36
26	46	58	163	47	37	572	55	47	13	4.6	6.1	36
27	46	104	193	46	37	561	56	48	9.8	4.5	5.4	37
28	46	176	179	46	37	538	83	30	5.9	4.8	4.2	36
29	46	210	132	46	37	365	59	32	9.5	4.6	4.8	25
30	45	210	121	46	---	282	168	31	33	4.5	5.4	29
31	45	---	91	45	---	294	---	30	---	4.5	5.8	---
TOTAL	3676	3225	3106	1937	1077	5772	6666	2644	810.2	539.7	218.3	584.5
MEAN	119	108	100	62.5	37.1	186	222	85.3	27.0	17.4	7.04	19.5
MAX	289	210	193	126	60	572	488	244	43	59	24	43
MIN	45	51	59	45	25	27	55	30	5.9	4.5	4.2	5.4

CAL YR 1979 TOTAL 43683.3 MEAN 120 MAX 594 MIN 9.3
WTR YR 1980 TOTAL 30255.7 MEAN 82.7 MAX 572 MIN 4.2

01085500 CONTOOCOOK RIVER BELOW HOPKINTON DAM, AT WEST HOPKINTON, NH

LOCATION.--Lat 43°11'31", long 71°44'51", Merrimack County, Hydrologic Unit 01070003, on right bank 400 ft (100 m) downstream from covered bridge at West Hopkinton, 0.2 mi (0.3 km) downstream from Hopkinton Dam, and 5.9 mi (9.5 km) upstream from Warner River.

DRAINAGE AREA.--427 mi^2 (1,106 km^2).

PERIOD OF RECORD.--August 1903 to April 1907 (no winter records), August 1963 to current year. Published as "at West Hopkinton" 1903-7.

GAGE.--Water-stage recorder. Altitude of gage is 355 ft (108 m), from topographic map. August 1903 to April 1907, nonrecording gage at site 400 ft (100 m) upstream at different datum.

REMARKS.--Records good except those for winter period and periods of backwater from grass, Oct 1 to Dec. 10, June 1 to Sept. 24, which are fair. Flow regulated by powerplants and by Nubanusit Lake, Edward Macdowell Reservoir since 1950, Highland Lake, Lake Franklin Pierce, Hopkinton Lake since 1962 (Reservoirs in Merrimack River basin), and other reservoirs upstream. Diversion from Hopkinton Lake to Everett Lake on Piscataquog River during periods of high flow in March 1968, April 1969, March 1977, and March 1979. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--17 years (water years 1963-80), 700 ft^3/s (19.82 m^3/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,620 ft^3/s (187 m^3/s) Mar. 17, 1977, gage height, 10.04 ft (3.060 m); minimum daily, 15 ft^3/s (0.42 m^3/s) July 22, 1965.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,890 ft^3/s (138 m^3/s) Mar. 24, gage height, 8.24 ft (2.512 m); minimum daily discharge, 48 ft^3/s (1.36 m^3/s) Sept. 12, 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	422	527	1010	692	330	170	1790	1510	203	164	127	60
2	724	487	973	535	325	170	1670	1240	138	207	230	64
3	1230	568	935	500	320	170	1570	942	145	222	148	151
4	2140	1140	866	450	300	170	1500	889	253	422	121	124
5	2360	1290	781	445	290	170	1820	815	214	377	121	64
6	2400	1190	749	400	280	170	1790	797	196	357	130	118
7	2270	1090	817	395	270	165	1690	791	218	337	91	104
8	1920	973	823	400	250	150	1430	849	185	319	161	51
9	1470	768	724	400	220	200	1400	915	188	138	148	56
10	1410	736	710	400	200	350	2110	898	283	96	66	91
11	1390	805	712	410	180	475	2790	695	314	138	127	115
12	1320	859	666	430	180	754	3160	715	270	157	138	48
13	1510	1020	657	450	200	875	3190	681	270	121	121	53
14	1560	1010	639	480	210	750	3260	657	249	178	138	55
15	1400	928	512	470	170	600	3280	640	151	145	58	56
16	1260	835	449	460	180	575	2960	622	199	167	79	56
17	1100	793	556	450	200	550	2420	599	266	148	82	138
18	811	736	882	440	190	725	2040	465	192	132	75	77
19	859	663	821	430	180	871	1740	377	207	138	75	51
20	755	681	704	400	175	2040	1410	417	207	138	73	56
21	599	663	632	390	170	3010	1270	433	161	130	77	60
22	651	675	617	380	200	3000	1090	427	181	157	79	62
23	634	768	532	370	210	3520	884	397	207	148	91	102
24	634	805	473	360	200	4480	728	357	287	56	84	94
25	640	538	610	350	195	3940	624	300	211	107	94	48
26	628	574	1460	350	190	2870	614	226	245	49	91	52
27	568	915	1590	340	185	2480	660	181	249	130	132	83
28	530	1090	1370	340	180	2180	656	237	211	58	124	157
29	492	1040	1220	340	175	1890	827	305	148	79	58	75
30	562	1040	1100	340	---	1920	1400	291	118	91	138	59
31	544	---	853	335	---	2190	---	300	---	127	75	---
TOTAL	34793	25207	25443	12932	6355	41580	51773	18968	6366	5233	3352	2380
MEAN	1122	840	821	417	219	1341	1726	612	212	169	108	79.3
MAX	2400	1290	1590	692	330	4480	3280	1510	314	422	230	157
MIN	422	487	449	335	170	150	614	181	118	49	58	48

CAL YR 1979 TOTAL 358621 MEAN 983 MAX 4560 MIN 84
WTR YR 1980 TOTAL 234382 MEAN 640 MAX 4480 MIN 48

01085800 WEST BRANCH WARNER RIVER NEAR BRADFORD, NH

LOCATION.--Lat 43°15'33", long 72°01'35", Merrimack County, Hydrologic Unit 01070003, on left bank 75 ft (23 m) downstream from small right-bank tributary, 200 ft (60 m) upstream from highway bridge, and 3.5 mi (5.6 km) west of Bradford.

DRAINAGE AREA.--5.75 mi^2 (14.89 km^2).

PERIOD OF RECORD.--Discharge: May 1962 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 950 ft (290 m), from topographic map.

REMARKS.--Records good except those for winter period, which are fair, and periods of no gage-height record, Oct. 1 to Nov. 14, and July 25 to Aug. 18, which are poor. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--18 years, 11.4 ft^3/s (0.323 m^3/s) 26.92 in/yr (684 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 603 ft^3/s (17.1 m^3/s) Apr. 1, 1976, gage height, 8.49 ft (2.588 m), from rating curve extended above 210 ft^3/s (5.9 m^3/s); minimum, about 0.06 ft^3/s (0.002 m^3/s) about Sept. 20, 1964.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 110 ft^3/s (3.1 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Nov. 27	0030	143	4.0	6.21	1.89
Mar. 21	2345	149	4.2	6.27	1.91
Apr. 10	0415	590	16.7	8.75	2.67

Minimum discharge, 0.41 ft^3/s (0.012 m^3/s) Sept. 12, 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	4.4	11	5.8	1.1	1.0	33	24	1.6	9.0	1.0	.47
2	25	4.3	9.3	4.9	1.1	.98	32	19	1.9	3.5	1.3	.49
3	30	25	7.6	4.4	1.0	.94	32	16	6.1	2.7	1.1	.68
4	25	18	7.4	3.9	.96	.90	52	13	10	2.0	.90	.66
5	19	14	7.0	3.5	.93	.88	42	11	5.2	1.5	.84	.61
6	25	11	7.1	3.3	.91	.89	31	10	3.4	2.3	.80	.58
7	18	9.2	18	3.2	.90	1.0	29	16	2.7	1.5	.74	.54
8	15	8.0	12	3.1	.89	1.5	26	17	3.3	1.4	.68	.51
9	17	7.0	8.6	3.0	.88	3.2	30	13	3.5	2.0	.62	.47
10	15	9.0	7.9	3.0	.87	2.4	251	11	2.7	1.6	.60	.47
11	13	8.6	7.4	3.3	.86	2.9	90	9.7	2.3	1.3	.70	.44
12	17	11	7.3	12	.86	2.0	44	9.1	2.2	1.2	.80	.41
13	23	9.5	7.2	6.4	.86	1.4	34	8.9	2.0	1.0	.90	.41
14	15	10	6.5	5.1	.86	1.4	27	8.6	1.7	.93	.80	.46
15	11	9.5	5.4	4.5	.87	1.3	45	7.4	1.5	.82	.70	.60
16	9.5	8.5	6.5	4.2	.88	1.2	32	6.7	2.7	.74	.68	.57
17	8.5	7.3	5.8	3.9	.90	1.5	23	5.9	2.0	.68	.66	.54
18	7.8	6.7	5.3	3.6	.94	50	20	5.9	1.6	.68	.64	.80
19	7.0	6.1	4.9	3.3	.96	38	17	7.9	1.5	.68	.62	.73
20	6.4	5.6	4.5	3.1	.98	20	16	6.3	1.8	.66	.63	.59
21	5.6	5.1	4.3	2.9	.98	50	18	5.2	6.1	.76	.81	.54
22	5.5	4.7	5.0	2.6	.98	79	16	4.5	3.1	.76	.84	.57
23	5.5	4.7	5.9	2.3	.98	36	14	3.8	2.0	.68	.82	.52
24	6.4	4.7	7.2	2.1	1.0	39	12	3.5	1.6	.68	.76	.47
25	6.0	4.7	58	1.9	1.0	32	12	3.6	1.4	.65	.67	.47
26	5.8	25	38	1.8	1.0	23	13	2.9	1.2	.64	.56	2.0
27	5.5	64	21	1.6	1.0	26	12	2.5	1.0	.64	.47	1.2
28	5.2	23	14	1.5	1.0	38	17	2.2	.85	.63	.47	.93
29	4.8	16	11	1.4	1.0	51	51	2.0	.91	.62	.47	.75
30	4.7	12	9.0	1.3	---	64	40	1.9	5.7	.60	.47	.68
31	4.5	---	7.0	1.2	---	36	---	1.7	---	.70	.47	---
TOTAL	376.7	356.6	337.1	108.1	27.45	607.39	1111	260.2	83.56	43.55	22.52	19.16
MEAN	12.2	11.9	10.9	3.49	.95	19.6	37.0	8.39	2.79	1.40	.73	.64
MAX	30	64	58	12	1.1	79	251	24	10	9.0	1.3	2.0
MIN	4.5	4.3	4.3	1.2	.86	.88	12	1.7	.85	.60	.47	.41
CFSM	2.12	2.07	1.90	.61	.17	3.41	6.44	1.46	.49	.24	.13	.11
IN.	2.44	2.31	2.18	.70	.18	3.93	7.19	1.68	.54	.28	.15	.12

CAL YR 1979 TOTAL 5007.87 MEAN 13.7 MAX 232 MIN .33 CFSM 2.38 IN 32.39
WTR YR 1980 TOTAL 3353.33 MEAN 9.16 MAX 251 MIN .41 CFSM 1.59 IN 21.69

01087000 BLACKWATER RIVER NEAR WEBSTER, NH

LOCATION.--Lat 43°17'45", long 71°41'46", Merrimack County, Hydrologic Unit 01070003, on left bank 0.2 mi (0.3 km) west of Dingit Corner, 2.4 mi (3.9 km) downstream from Blackwater Dam, 2.5 mi (4.0 km) southeast of Webster, and 6.5 mi (10.5 km) upstream from mouth.

DRAINAGE AREA.--129 mi^2 (334 km^2).

PERIOD OF RECORD.--Discharge: May 1918 to September 1920, February 1927 to current year. Published as "near Contoocook" 1918-20, 1927-35. Records published for both sites October 1934 to September 1935.
Water-quality records: Water year 1957.

REVISED RECORDS.--WSP 696: Drainage area. WSP 821: 1936(M). WSP 851: 1936. WSP 867: 1936 (flood-report data). WSP 1231: 1919-20, 1927, 1928(M), 1929-32, 1933-34(M), 1936 (calendar-year summaries).

GAGE.--Water-stage recorder. Altitude of gage is 430 ft (131 m), from topographic map. Prior to Oct. 1, 1935, chain gage at site 5 mi (8 km) downstream at different datum.

REMARKS.--Records good except those for winter period and period of no gage-height record, Jan. 21 to Mar. 2, which are fair. High flow regulated by Blackwater Reservoir since 1941 (Reservoirs in Merrimack River basin). Some regulation at low flow prior to 1933 by mill above station. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--55 years, 213 ft^3/s (6.032 m^3/s), 22.42 in/yr (570 mm/yr), adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,000 ft^3/s (312 m^3/s) Mar. 19, 1936, gage height, 11.78 ft (3.591 m), from floodmarks, from rating curve extended above 6,700 ft^3/s (190 m^3/s) on basis of slope-area and critical-depth measurements of peak flow; minimum, 3 ft^3/s (0.085 m^3/s) Sept. 17, 1941; minimum daily, 7.6 ft^3/s (0.22 m^3/s) Sept. 29, 1964. Maximum discharge since construction of Blackwater Reservoir in 1941, 2,390 ft^3/s (67.7 m^3/s) Apr. 16, 1951, Apr. 10, 1952, gage height, 7.18 ft (2.188 m).
Maximum stage since at least 1733, that of Mar. 19, 1936.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,740 ft^3/s (49.3 m^3/s) Apr. 12, gage height, 6.50 ft (1.981 m); minimum, 13 ft^3/s (0.37 m^3/s) Aug. 29-31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	298	135	231	170	68	36	612	402	67	99	22	14
2	433	130	197	140	66	36	539	365	65	123	27	15
3	581	159	163	130	64	35	506	308	78	115	32	16
4	671	227	155	110	62	35	486	269	149	93	37	18
5	626	281	147	105	60	35	532	237	375	75	37	32
6	437	251	141	100	58	35	588	215	322	67	34	39
7	330	201	147	95	56	35	530	210	209	59	31	34
8	300	172	163	95	52	40	453	225	158	53	28	28
9	290	157	159	90	45	55	425	241	132	53	25	23
10	280	153	147	90	41	72	686	243	115	54	23	20
11	280	174	135	85	38	95	1290	224	104	53	24	17
12	260	188	130	90	38	107	1730	206	95	52	25	15
13	290	180	129	100	41	122	1650	195	87	47	27	14
14	340	168	129	110	44	112	1140	186	80	44	28	14
15	300	161	105	105	35	95	671	176	74	41	28	14
16	260	157	123	100	38	83	650	164	72	38	27	14
17	210	150	131	90	40	78	639	153	69	36	25	14
18	200	139	82	85	39	124	547	144	67	34	23	16
19	200	129	107	80	37	233	459	147	65	33	22	17
20	200	124	118	78	36	375	409	163	61	31	21	18
21	190	120	115	77	35	418	355	165	65	30	21	20
22	170	116	104	76	39	471	313	151	70	29	20	20
23	160	114	101	76	43	644	289	137	70	29	19	20
24	150	112	103	74	41	717	270	123	67	28	18	18
25	160	110	175	73	40	675	255	114	62	27	17	18
26	170	122	378	72	39	627	251	105	57	26	16	22
27	175	246	555	72	38	499	253	94	52	24	15	23
28	165	422	460	72	37	450	260	89	47	23	14	24
29	147	410	322	71	36	468	283	83	43	22	13	27
30	144	293	251	70	---	544	356	76	50	23	13	28
31	140	---	187	70	---	626	---	71	---	22	13	---
TOTAL	8557	5501	5590	2851	1306	7977	17427	5681	3027	1483	725	612
MEAN	276	183	180	92.0	45.0	257	581	183	101	47.8	23.4	20.4
MAX	671	422	555	170	68	717	1730	402	375	123	37	39
MIN	140	110	82	70	35	35	251	71	43	22	13	14
MEAN†	276	184	180	91.9	44.8	262	577	182	101	47.8	23.4	20.4
CFSM†	2.14	1.43	1.40	.71	.35	2.03	4.47	1.41	.78	.37	.18	.16
IN†	2.47	1.59	1.61	.82	.37	2.34	4.99	1.63	.87	.43	.21	.18

CAL YR 1979 TOTAL 93521 MEAN 256 MAX 1900 MIN 37 MEAN† 256 CFSM† 1.98 IN† 26.97
WTR YR 1980 TOTAL 60737 MEAN 166 MAX 1730 MIN 13 MEAN† 166 CFSM† 1.29 IN† 17.51

† Adjusted for change in contents in Blackwater Reservoir.

01088400 MERRIMACK RIVER AT CONCORD, NH
(National stream-quality accounting network station)

LOCATION.--Lat 43°12'32", long 71°31'51", Merrimack County, Hydrologic Unit 01070002, on downstream side of bridge on State Highway 4 in Concord.
DRAINAGE AREA.--2,300 mi^2 (5,957 km^2).
PERIOD OF RECORD.--Water years 1979 to current year.
PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: November 1979 to September 1980.
WATER TEMPERATURE: November 1979 to September 1980.
INSTRUMENTATION:.--Water-quality monitor since November 1979.
REMARKS:.--Interruptions in the record were due to malfunction of the instrument.
EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum recorded, 84 micromhos Mar. 8; minimum reocrded, 25 micromhos Apr. 11, 12.
WATER TEMPERATURE: Maximum recorded, 27.5°C July 21; minimum recorded, 0.0°C on many days during winter period.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH FIELD (UNITS)	TEMPERATURE, WATER (DEG C)	TURBIDITY (NTU)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS (MG/L AS CACO3)
OCT 30...	1530	2630	56	6.3	8.5	1.0	11.8	101	K500	130	11
NOV 26...	1200	2840	56	6.3	7.0	1.0	12.4	102	390	100	12
DEC 19...	1030	2790	55	6.0	.0	--	14.6	100	120	67	12
JAN 22...	0945	E2000	60	5.6	.0	.40	14.4	98	580	75	12
MAR 26...	1040	9120	35	5.8	3.0	.15	14.6	108	110	42	8
APR 29...	1230	9500	35	5.6	8.0	15	11.4	96	1930	380	10
MAY 21...	1115	3760	43	6.0	15.1	.90	10.3	102	K12000	1100	11
JUN 23...	1115	2280	52	5.7	21.0	.25	8.3	92	330	62	11
JUL 30...	1630	2200	74	6.4	26.0	.50	7.4	90	2200	1100	13
AUG 25...	1115	1980	77	6.2	22.5	1.1	8.6	98	K20000	104	12
SEP 24...	1345	E1000	75	6.3	19.0	.25	8.8	94	6000	360	39

DATE	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)
OCT 30...	0	3.4	.6	6.9	.8	11	5.9	8.0	.2	6.2	48
NOV 26...	0	3.8	.7	5.8	.7	13	6.5	7.9	.2	6.0	42
DEC 19...	0	3.7	.6	5.7	.7	15	5.9	8.5	.1	6.2	57
JAN 22...	4	3.7	.7	6.5	.9	8	7.5	9.5	.1	5.6	44
MAR 26...	5	2.6	.4	4.5	.8	3	6.1	6.9	.1	4.3	42
APR 29...	6	3.0	.6	4.2	.7	4	5.4	6.1	.2	4.3	36
MAY 21...	7	3.2	.7	5.8	.6	4	6.5	7.1	.2	5.3	42
JUN 23...	7	3.5	.6	6.1	.8	4	5.7	8.8	.2	4.4	50
JUL 30...	0	3.7	.9	7.5	.9	14	6.5	11	.2	4.1	60
AUG 25...	0	3.3	.8	8.5	1.0	13	7.1	12	.3	2.5	46
SEP 24...	15	13	1.6	5.4	1.1	24	8.8	7.1	.1	4.3	82

K, NON-IDEAL COLONY COUNT.
E, ESTIMATED.

01088400 MERRIMACK RIVER AT CONCORD, NH--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)
OCT 30...	39	.11	.12	.030	.040	.74	.70	.90	.73	.00	.78
NOV 26...	40	.13	.13	.050	.040	.34	.30	.51	.35	.00	.38
DEC 19...	41	.16	.16	.050	.070	.51	.25	.74	.30	.00	.58
JAN 22...	40	.16	.16	.140	.070	.30	.23	.53	.37	.00	.37
MAR 26...	28	.18	.18	.050	.060	.21	.29	.45	.34	.07	.27
APR 29...	28	.18	.19	.040	.030	.23	.30	.45	.34	.08	.26
MAY 21...	33	.30	.30	.010	.000	.18	.16	.48	.17	.00	.18
JUN 23...	33	.17	.18	.060	.040	.41	.24	.63	.30	.00	.45
JUL 30...	44	.16	.16	.060	.000	.16	.00	.32	.02	.00	.16
AUG 25...	44	.13	.13	.050	.040	.24	.30	.41	.35	.07	.28
SEP 24...	57	.25	.25	.060	.040	.09	.10	.38	.16	.03	.13

DATE	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, TOTAL (MG/L AS PO4)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC SUS-PENDED (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 30...	.84	.020	.06	.010	--	.4	3.7	1	7.1	100
NOV 26...	.48	.020	.06	.010	3.3	--	--	1	7.7	100
DEC 19...	.46	.020	.06	.010	3.6	--	--	2	15	100
JAN 22...	.53	.020	.06	.020	--	.4	3.9	2	11	80
MAR 26...	.52	.040	.12	.010	4.1	--	--	5	123	80
APR 29...	.52	.020	.06	.010	--	.4	4.8	6	154	89
MAY 21...	.47	.040	.12	.030	2.7	--	--	7	71	93
JUN 23...	.47	.030	.09	.010	3.3	--	--	5	31	95
JUL 30...	.18	.040	.12	.010	--	2.2	3.0	--	--	--
AUG 25...	.48	.040	.12	--	2.2	--	--	37	198	100
SEP 24...	.41	.030	.09	.020	3.8	--	--	13	35	100

DATE	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS-PENDED TOTAL (UG/L AS AS)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA)	BARIUM, SUS-PENDED RECOV-ERABLE (UG/L AS BA)	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CADMIUM SUS-PENDED RECOV-ERABLE (UG/L AS CD)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	CHRO-MIUM, SUS-PENDED RECOV. (UG/L AS CR)
OCT 30...	1	1	0	200	200	0	0	0	0	20	10
JAN 22...	0	0	0	50	<30	20	0	0	3	<10	<0
MAR 26...	--	--	--	--	--	--	--	--	--	--	--
APR 29...	1	0	1	<50	--	10	0	0	5	20	10
MAY 21...	--	--	--	--	--	--	--	--	--	--	--
JUL 30...	0	0	0	100	--	<50	0	0	0	20	10
AUG 25...	--	--	--	--	--	--	--	--	--	--	--
SEP 24...	--	--	--	--	--	--	--	--	--	--	--

01088400 MERRIMACK RIVER AT CONCORD, NH--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, TOTAL RECOVERABLE (UG/L AS CO)	COBALT, SUSPENDED RECOVERABLE (UG/L AS CO)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, SUSPENDED RECOVERABLE (UG/L AS CU)	COPPER, DISSOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)
OCT 30...	10	0	0	1	3	0	3	360	230	130	0
JAN 22...	<10	0	0	0	2	0	3	220	120	100	2
MAR 26...	--	--	--	--	--	--	--	--	--	--	--
APR 29...	10	0	0	0	5	4	1	990	910	80	0
MAY 21...	--	--	--	--	--	--	--	--	--	--	--
JUL 30...	10	0	0	0	1	0	4	290	210	80	5
AUG 25...	--	--	--	--	--	--	--	--	--	--	--
SEP 24...	--	--	--	--	--	--	--	--	--	--	--

DATE	LEAD, SUSPENDED RECOVERABLE (UG/L AS PB)	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY SUSPENDED RECOVERABLE (UG/L AS HG)	MERCURY DISSOLVED (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICKEL, SUSPENDED RECOVERABLE (UG/L AS NI)
OCT 30...	0	1	20	0	30	<.1	<.0	<.1	2	2
JAN 22...	0	2	40	0	40	<.1	<.0	<.1	10	8
MAR 26...	--	--	--	--	--	--	--	--	--	--
APR 29...	0	0	50	20	30	<.1	<.0	<.1	4	0
MAY 21...	--	--	--	--	--	--	--	--	--	--
JUL 30...	5	0	30	0	30	<.1	--	<.1	0	0
AUG 25...	--	--	--	--	--	--	--	--	--	--
SEP 24...	--	--	--	--	--	--	--	--	--	--

DATE	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, SUSPENDED TOTAL (UG/L AS SE)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, TOTAL RECOVERABLE (UG/L AS AG)	SILVER, SUSPENDED RECOVERABLE (UG/L AS AG)	SILVER, DISSOLVED (UG/L AS AG)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, SUSPENDED RECOVERABLE (UG/L AS ZN)	ZINC, DISSOLVED (UG/L AS ZN)
OCT 30...	0	0	0	0	--	--	0	10	0	20
JAN 22...	2	0	0	0	0	0	0	380	350	30
MAR 26...	--	--	--	--	0	--	--	--	--	--
APR 29...	4	0	0	0	0	0	0	20	10	10
MAY 21...	--	--	--	--	0	--	--	--	--	--
JUL 30...	0	0	0	0	0	0	0	10	0	10
AUG 25...	--	--	--	--	0	--	--	--	--	--
SEP 24...	--	--	--	--	0	--	--	--	--	--

01088400 MERRIMACK RIVER AT CONCORD, NH--Continued

QUALITATIVE AND QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

PHYTOPLANKTON

DATE	NOV 26,79	MAY 21,80	JUN 23,80	JUL 30,80	AUG 25,80	SEP 24,80
TIME	1200	1115	1115	1630	1115	1345
TOTAL CELLS/ML	350	77	1500	910	1900	1100
DIVERSITY: DIVISION	1.6	1.3	1.3	1.1	1.6	1.4
.CLASS	2.0	1.3	1.3	1.1	1.6	1.4
..ORDER	2.1	1.9	2.2	1.6	2.4	1.5
...FAMILY	2.9	2.3	2.3	2.2	2.9	2.0
....GENUS	3.0	2.3	2.4	2.9	3.2	2.4

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)												
.CHLOROPHYCEAE												
..CHLOROCOCCALES												
...HYDRODICTYACEAE												
....PEDIASTRUM	--	-	--	-	--	-	--	-	100	6	--	-
...MICRACTINIACEAE												
....MICRACTINIUM	--	-	--	-	--	-	--	-	--	-	26	2
...OOCYSTACEAE												
....ANKISTRODESMUS	35	10	--	-	13	1	51	6	130	7	64	6
....DICTYOSPHAERIUM	--	-	--	-	130	8	64	7	--	-	--	-
....KIRCHNERIELLA	--	-	--	-	--	-	--	-	52	3	--	-
....OOCYSTIS	--	-	--	-	13	1	--	-	--	-	13	1
....SELENASTRUM	--	-	--	-	--	-	--	-	52	3	150	14
....TETRAEDRON	--	-	13‡	17	--	-	--	-	--	-	13	1
....WESTELLA	--	-	--	-	--	-	210‡	23	--	-	--	-
...SCENEDESMACEAE												
....CRUCIGENIA	--	-	--	-	--	-	130	14	230	12	100	9
....SCENEDESMUS	10	3	--	-	--	-	100	11	77	4	51	5
..TETRASPORALES												
...PALMELLACEAE												
....SPHAEROCYSTIS	--	-	--	-	--	-	--	-	100	6	--	-
..VOLVOCALES												
...CHLAMYDOMONADACEAE												
....CHLAMYDOMONAS	--	-	--	-	39	3	51	6	--	-	26	2
..ZYGNEMATALES												
...DESMIDIACEAE												
....COSMARIUM	5	1	--	-	--	-	--	-	--	-	--	-
CHRYSOPHYTA												
.BACILLARIOPHYCEAE												
..CENTRALES												
...COSCINODISCACEAE												
....CYCLOTELLA	5	1	--	-	13	1	13	1	150	8	39	3
....MELOSIRA	--	-	26‡	33	26	2	--	-	--	-	--	-
..PENNALES												
...CYMBELLACEAE												
....CYMBELLA	--	-	--	-	--	-	13	1	--	-	--	-
...FRAGILARIACEAE												
....ASTERIONELLA	71‡	20	13‡	17	--	-	--	-	--	-	--	-
....SYNEDRA	10	3	--	-	13	1	--	-	13	1	--	-
...GOMPHONEMATACEAE												
....GOMPHONEMA	10	3	--	-	13	1	--	-	--	-	--	-
...NAVICULACEAE												
....NAVICULA	10	3	--	-	--	-	13	1	39	2	--	-
...NITZSCHIACEAE												
....NITZSCHIA	50	14	13‡	17	26	2	--	-	--	-	--	-
.CHRYSOPHYCEAE												
..CHRYSOMONADALES												
...OCHROMONADACEAE												
....DINOBRYON	40	12	--	-	--	-	--	-	--	-	--	-
.XANTHOPHYCEAE												
..HETEROCOCCALES												
...CHLOROTHECIACEAE												
....OPHIOCYTIUM	--	-	--	-	13	1	--	-	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)												
.CRYPTOPHYCEAE												
..CRYPTOMONADALES												
...CRYPTOCHRYSIDACEAE												
....CHROOMONAS	--	-	--	-	26	2	--	-	90	5	--	-
...CRYPTOMONADACEAE												
....CRYPTOMONAS	15	4	13‡	17	26	2	--	-	13	1	13	1
CYANOPHYTA (BLUE-GREEN ALGAE)												
.CYANOPHYCEAE												
..CHROOCOCCALES												
...CHROOCOCCACEAE												
....ANACYSTIS	--	-	--	-	570‡	37	26	3	500‡	27	--	-
..HORMOGONALES												
...NOSTOCACEAE												
....ANABAENA	--	-	--	-	570‡	37	--	-	--	-	--	-
...OSCILLATORIACEAE												
....OSCILLATORIA	86‡	25	--	-	--	-	240‡	27	310‡	17	590‡	53

NOTE: ‡ - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15 PERCENT
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2 PERCENT

01088400 MERRIMACK RIVER AT CONCORD, NH--Continued

QUALITATIVE AND QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980--Continued

PHYTOPLANKTON

DATE	NOV 26,79		MAY 21,80		JUN 23,80		JUL 30,80		AUG 25,80		SEP 24,80	
TIME	1200		1115		1115		1630		1115		1345	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
EUGLENOPHYTA (EUGLENOIDS)												
.EUGLENOPHYCEAE												
..EUGLENALES												
...EUGLENACEAE												
....EUGLENA	--	-	--	-	--	-	--	-	--	-	13	1
....TRACHELOMONAS	--	-	--	-	--	-	--	-	--	-	13	1
PYRRHOPHYTA (FIRE ALGAE)												
.DINOPHYCEAE												
..PERIDINIALES												
...GLENODINIACEAE												
....GLENODINIUM	--	-	--	-	39	3	--	-	--	-	--	-

NOTE: ‡ - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15 PERCENT
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2 PERCENT

01088400 MERRIMACK RIVER AT CONCORD, NH--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1				---	---	---	33	30	31	50	45	47
2				---	---	---	34	32	33	50	47	49
3				---	---	---	37	34	36	54	49	51
4				---	---	---	38	36	37	54	50	52
5				---	---	---	42	38	40	55	50	53
6				59	56	57	41	40	40	56	54	55
7				57	55	56	47	42	43	57	55	56
8				55	52	53	43	42	43	58	56	57
9				54	52	53	45	43	44	58	55	57
10				52	50	52	46	44	45	59	57	58
11				53	50	51	48	46	47	64	59	60
12				51	48	49	49	46	48	62	57	59
13				50	47	49	51	48	49	61	56	58
14				52	47	49	53	49	51	57	54	55
15				53	48	50	54	50	52	58	55	57
16				53	49	51	56	53	54	62	58	60
17				52	47	49	58	54	56	62	60	61
18				51	46	49	55	53	54	64	60	63
19				50	47	49	56	54	55	65	62	64
20				52	48	51	57	55	56	64	60	62
21				53	49	51	57	55	56	61	58	59
22				48	47	47	56	55	56	62	56	59
23				49	46	47	56	55	55	62	56	59
24				54	46	51	57	55	56	62	60	61
25				56	47	52	55	52	53	63	60	62
26				56	43	50	53	49	51	64	62	63
27				44	38	41	51	47	49	65	64	64
28				36	30	34	48	43	45	66	64	65
29				28	27	28	44	42	43	67	66	66
30				30	27	29	44	42	43	67	65	66
31				---	---	---	47	44	45	68	67	67
MONTH				59	27	48	58	30	47	68	45	59

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	68	67	67	73	71	72	32	31	31	38	37	38
2	68	67	67	75	72	74	32	30	31	39	38	38
3	69	67	68	75	73	74	33	31	32	40	37	39
4	69	67	68	74	72	73	34	32	33	41	38	40
5	71	68	70	74	71	73	34	32	33	41	39	40
6	71	69	70	75	73	74	33	31	32	43	40	41
7	70	68	68	74	72	73	33	32	32	43	41	43
8	68	67	67	84	74	79	35	33	34	45	42	43
9	68	66	67	80	78	79	35	34	35	44	41	43
10	70	68	69	79	77	78	36	33	35	45	42	43
11	69	68	69	77	73	75	32	25	29	45	41	43
12	69	67	68	76	71	73	26	25	25	48	43	46
13	70	69	69	74	71	73	29	26	28	49	43	46
14	69	67	68	71	68	69	30	29	30	55	46	50
15	69	68	69	71	67	69	33	30	32	60	45	51
16	70	68	69	72	70	71	33	31	32	61	43	48
17	70	68	69	79	71	74	33	31	32	48	43	45
18	70	67	69	80	61	75	35	33	34	48	45	46
19	69	67	68	59	55	56	37	34	36	50	45	47
20	70	68	69	56	47	51	39	36	37	47	43	45
21	73	70	71	48	45	46	43	37	39	47	42	45
22	75	72	73	45	39	43	40	38	39	50	46	48
23	78	73	75	38	31	34	42	40	41	50	46	47
24	75	73	74	30	28	29	43	40	42	48	45	46
25	75	73	74	29	27	28	43	41	41	47	44	46
26	76	73	75	36	29	33	42	40	41	49	44	47
27	74	72	73	36	34	35	42	41	41	50	46	48
28	73	71	72	35	33	34	41	40	40	50	46	48
29	72	71	71	36	34	35	40	38	39	52	48	49
30	---	---	---	35	33	34	41	38	40	52	49	50
31	---	---	---	34	32	33	---	---	---	53	50	51
MONTH	78	66	70	84	27	59	43	25	35	61	37	45

01088400 MERRIMACK RIVER AT CONCORD, NH--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	54	52	53	62	59	60						
2	55	51	52	59	56	57						
3	54	51	52	59	56	57						
4	56	51	53	59	56	57						
5	54	48	51	57	55	56						
6	54	50	52	57	55	56						
7	51	49	50	60	54	56						
8	54	49	51	59	54	57						
9	54	52	53	63	55	59						
10	55	53	54	64	55	60						
11	55	52	54	62	57	60						
12	54	51	52	61	58	59						
13	54	50	52	61	57	59						
14	53	50	52	64	57	60						
15	56	52	53	62	58	60						
16	58	53	55	64	58	59						
17	55	52	54	62	58	60						
18	57	53	55	62	58	60						
19	56	52	54	63	58	60						
20	56	54	55	64	58	60						
21	57	55	56	68	59	62						
22	56	53	55	73	59	64						
23	55	52	53	73	59	62						
24	54	51	52	69	58	61						
25	55	53	54	71	57	61						
26	57	55	56	68	58	61						
27	59	57	58	65	58	59						
28	60	58	59	74	59	62						
29	61	58	59	61	59	60						
30	59	58	59	62	59	61						
31	---	---	---	---	---	---						
MONTH	61	48	54	74	54	60						
YEAR	84	25	53									

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1				---	---	---	6.0	5.0	5.5	.5	.0	.0
2				---	---	---	5.0	4.0	4.5	.5	.0	.0
3				---	---	---	4.0	3.0	3.5	.0	.0	.0
4				---	---	---	3.0	2.5	3.0	.0	.0	.0
5				---	---	---	2.5	2.0	2.5	.0	.0	.0
6				---	7.5	7.5	2.5	2.0	2.5	.0	.0	.0
7				7.5	7.0	7.5	3.0	2.5	3.0	.0	.0	.0
8				7.5	7.0	7.5	3.0	2.0	2.5	.0	.0	.0
9				7.5	7.0	7.0	2.0	1.5	1.5	.0	.0	.0
10				8.5	7.5	8.0	1.5	1.0	1.5	.0	.0	.0
11				8.0	8.0	8.0	2.0	1.5	1.5	.0	.0	.0
12				8.0	7.5	7.5	2.5	1.5	2.0	.0	.0	.0
13				7.5	7.5	7.5	2.5	2.0	2.0	.0	.0	.0
14				7.5	7.0	7.5	2.0	1.5	1.5	.0	.0	.0
15				7.0	6.5	7.0	1.0	.5	1.0	.0	.0	.0
16				6.5	5.5	6.5	.5	.5	.5	.0	.0	.0
17				5.5	5.5	5.5	1.0	.0	.5	.0	.0	.0
18				6.0	5.5	5.5	.0	.0	.0	.0	.0	.0
19				6.0	5.5	5.5	.0	.0	.0	.5	.0	.0
20				5.5	5.5	5.5	.0	.0	.0	.5	.0	.5
21				5.5	5.0	5.5	.0	.0	.0	.0	.0	.0
22				6.0	5.5	5.5	.0	.0	.0	.0	.0	.0
23				6.5	5.5	6.0	.0	.0	.0	.0	.0	.0
24				7.0	6.0	6.5	.0	.0	.0	.0	.0	.0
25				7.5	7.0	7.0	.5	.0	.0	.0	.0	.0
26				8.5	7.5	8.0	1.0	.5	1.0	.0	.0	.0
27				8.5	7.5	8.0	.5	.5	.5	.0	.0	.0
28				8.5	7.0	8.0	.5	.0	.5	.0	.0	.0
29				8.5	7.0	8.0	.5	.0	.5	.0	.0	.0
30				7.0	6.0	6.5	.5	.5	.5	.0	.0	.0
31				---	---	---	.5	.0	.0	.0	.0	.0
MONTH				8.5	5.0	7.0	6.0	.0	1.5	.5	.0	.0

01088400 MERRIMACK RIVER AT CONCORD, NH--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	.0	.0	.0	.0	.0	.0	3.5	2.5	3.0	9.0	8.5	9.0
2	.0	.0	.0	.5	.0	.0	3.5	3.0	3.0	10.5	9.0	10.0
3	.5	.0	.0	.0	.0	.0	4.0	3.0	3.5	11.5	10.0	11.0
4	.5	.0	.0	.0	.0	.0	4.0	3.5	4.0	12.5	11.5	12.0
5	.5	.0	.0	.0	.0	.0	4.0	3.0	3.5	12.5	12.0	12.5
6	.0	.0	.0	.5	.0	.0	4.5	3.0	3.5	13.5	12.0	12.5
7	.0	.0	.0	.0	.0	.0	5.0	4.0	4.5	13.0	12.0	12.5
8	.5	.0	.0	.0	.0	.0	5.0	5.0	5.0	12.0	11.5	12.0
9	.5	.0	.0	.5	.0	.0	5.0	4.5	5.0	12.5	11.5	12.0
10	.5	.0	.0	.5	.0	.0	5.0	4.5	5.0	12.5	11.5	12.0
11	.5	.0	.0	.5	.0	.0	4.5	3.5	4.0	12.5	11.5	12.0
12	.0	.0	.0	.5	.0	.0	4.5	3.5	4.0	13.5	11.5	12.5
13	.5	.0	.0	.5	.0	.0	5.5	4.0	5.0	13.5	13.0	13.5
14	.5	.0	.0	.0	.0	.0	6.0	5.5	5.5	13.5	13.0	13.0
15	.5	.0	.0	.0	.0	.0	6.5	5.5	6.0	13.0	12.5	13.0
16	.0	.0	.0	.5	.0	.0	6.5	5.5	6.0	13.5	12.0	13.0
17	.0	.0	.0	.0	.0	.0	6.5	5.5	6.0	14.5	13.0	14.0
18	.0	.0	.0	.5	.0	.5	6.5	5.5	6.0	14.5	14.0	14.0
19	.0	.0	.0	.5	.0	.5	7.0	6.0	6.5	15.0	13.5	14.5
20	.0	.0	.0	.5	.0	.5	7.5	6.5	7.0	16.0	14.5	15.0
21	.0	.0	.0	.5	.0	.5	9.0	7.5	8.0	15.0	14.5	15.0
22	.0	.0	.0	1.0	.5	1.0	8.0	7.5	8.0	16.5	14.5	15.5
23	.0	.0	.0	2.0	.5	1.0	8.0	7.5	8.0	17.5	16.0	17.0
24	.0	.0	.0	2.0	1.0	1.5	9.5	8.0	8.5	18.0	16.5	17.0
25	.0	.0	.0	2.0	2.0	2.0	10.0	9.0	9.5	18.0	16.5	17.5
26	.0	.0	.0	2.5	1.5	2.0	9.5	9.0	9.5	17.5	16.5	17.0
27	.0	.0	.0	2.5	2.0	2.5	9.5	9.0	9.0	17.5	16.0	16.5
28	.0	.0	.0	3.0	2.0	2.5	9.5	9.0	9.5	18.0	16.0	17.0
29	.0	.0	.0	3.0	2.5	3.0	9.0	8.0	8.5	18.0	16.0	17.0
30	---	---	---	3.0	2.5	2.5	8.5	8.0	8.0	18.5	16.5	17.5
31	---	---	---	2.5	2.5	2.5	---	---	---	18.5	17.0	18.0
MONTH	.5	.0	.0	3.0	.0	.5	10.0	2.5	6.0	18.5	8.5	14.0

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	20.0	18.0	19.0	22.0	20.5	21.0						
2	19.5	19.0	19.0	21.5	20.5	21.0						
3	19.0	17.5	18.0	23.0	20.5	21.5						
4	17.5	17.0	17.5	24.0	21.5	22.5						
5	18.0	17.0	17.5	24.0	22.5	23.5						
6	18.5	17.0	18.0	23.5	22.5	23.0						
7	18.0	17.5	18.0	23.0	21.5	22.5						
8	17.5	16.5	17.0	22.5	21.5	21.5						
9	16.5	15.5	16.0	22.0	20.5	21.5						
10	17.0	15.5	16.0	23.0	21.0	22.0						
11	16.0	15.0	15.5	23.5	22.0	22.5						
12	16.5	14.5	15.5	23.5	22.5	22.5						
13	18.0	15.5	16.5	23.0	22.0	22.5						
14	19.5	17.0	18.0	23.5	22.0	23.0						
15	20.0	18.0	19.0	23.5	23.0	23.5						
16	20.0	18.5	19.5	25.5	23.5	24.5						
17	20.5	18.5	19.5	26.0	25.0	25.5						
18	21.0	19.0	20.0	27.0	25.5	26.0						
19	21.5	19.5	20.5	26.5	26.0	26.0						
20	21.0	19.0	19.5	27.0	25.5	26.0						
21	19.0	18.0	18.5	27.5	26.0	26.5						
22	20.5	17.5	19.0	27.0	26.5	27.0						
23	21.5	19.0	20.5	27.0	26.5	26.5						
24	22.5	20.0	21.0	26.5	26.0	26.5						
25	23.5	21.0	22.5	27.0	25.5	26.0						
26	24.5	22.5	23.5	26.5	25.5	26.0						
27	25.0	23.5	24.0	27.0	25.5	26.5						
28	24.0	22.5	23.5	26.5	26.0	26.5						
29	23.5	22.0	22.5	26.0	25.0	25.5						
30	22.0	21.5	21.5	25.5	24.5	25.0						
31	---	---	---	---	---	---						
MONTH	25.0	14.5	19.0	27.5	20.5	24.0						
YEAR	27.5	.0	8.0									

01089000 SOUCOOK RIVER NEAR CONCORD, NH

LOCATION.--Lat 43°14'22", long 71°27'44", Merrimack County, Hydrologic Unit 01070002, on left bank 500 ft (150 m) upstream from U.S. Highway 4, 0.9 mi (1.4 km) upstream from Cemetery Brook, and 4.4 mi (7.1 km) northeast of State Capitol at Concord.

DRAINAGE AREA.--76.8 mi² (198.9 km²).

PERIOD OF RECORD.--Discharge: October 1951 to current year.
Water-quality records: Water years 1967-74.

REVISED RECORDS.--WSP 1331: 1952(M).

GAGE.--Water-stage recorder. Altitude of gage is 290 ft (88 m), from topographic map.

REMARKS.--Records fair. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--29 years, 110 ft³/s (3.115 m³/s), 19.45 in/yr (494 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,700 ft³/s (105 m³/s) Mar. 14, 1977, gage height, 14.50 ft (4.420 m); minimum, 1.5 ft³/s (0.042 m³/s) Aug. 7, 1965.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 700 ft³/s (20 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Apr. 11	0130	*1030	29.2	9.40	2.87						

Minimum discharge, 4.4 ft³/s (0.12 m³/s) Sept. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	71	72	102	109	36	28	162	225	37	45	26	10
2	180	69	96	90	32	26	156	184	39	40	56	8.1
3	152	159	88	80	30	25	149	155	52	31	40	6.7
4	296	283	86	76	28	24	145	137	96	28	31	6.3
5	205	195	84	72	26	23	167	122	75	25	25	5.9
6	145	157	82	70	26	22	189	110	63	24	26	5.5
7	125	133	80	68	25	21	187	119	53	24	25	5.3
8	102	119	78	68	25	21	171	139	49	25	20	5.0
9	99	109	76	66	24	22	162	146	50	30	17	4.8
10	128	114	74	66	24	27	600	130	45	30	17	4.7
11	118	140	72	65	24	38	850	115	40	29	17	4.8
12	113	134	72	97	24	63	516	109	36	31	17	4.8
13	166	128	70	91	24	77	379	100	34	31	17	5.0
14	150	119	68	80	25	82	303	100	30	29	16	5.2
15	120	117	68	76	25	81	309	91	26	24	14	5.3
16	106	109	66	72	26	77	334	85	41	24	14	4.8
17	96	101	66	70	27	73	263	78	35	24	13	4.8
18	88	97	66	68	27	80	220	72	30	23	13	6.5
19	82	93	64	66	28	215	191	79	26	23	11	6.5
20	78	91	64	64	29	248	170	79	23	22	11	6.3
21	74	88	64	60	32	220	161	71	43	19	11	6.5
22	71	85	64	60	35	228	149	68	53	20	11	6.3
23	69	84	64	67	38	233	141	63	40	20	11	6.5
24	73	83	78	63	39	222	138	60	35	20	9.9	6.3
25	104	82	192	56	38	213	127	56	29	18	9.6	12
26	91	87	397	59	37	197	125	53	25	18	9.6	20
27	81	162	262	54	34	187	127	48	22	17	9.0	19
28	78	156	198	50	33	178	129	46	20	16	9.0	17
29	79	131	168	45	30	169	154	44	19	17	8.7	16
30	79	114	145	40	---	163	290	40	29	25	8.4	14
31	75	---	126	38	---	163	---	38	---	24	9.6	---
TOTAL	3494	3611	3280	2106	851	3446	7164	2962	1195	776	532.8	239.9
MEAN	113	120	106	67.9	29.3	111	239	95.5	39.8	25.0	17.2	8.00
MAX	296	283	397	109	39	248	850	225	96	45	56	20
MIN	69	69	64	38	24	21	125	38	19	16	8.4	4.7
CFSM	1.47	1.56	1.38	.88	.38	1.45	3.11	1.24	.52	.33	.22	.10
IN.	1.69	1.75	1.59	1.02	.41	1.67	3.47	1.43	.58	.38	.26	.12

CAL YR 1979 TOTAL 47559.9 MEAN 130 MAX 1600 MIN 5.4 CFSM 1.69 IN 23.04
WTR YR 1980 TOTAL 29657.7 MEAN 81.0 MAX 850 MIN 4.7 CFSM 1.06 IN 14.37

01090800 PISCATAQUOG RIVER BELOW EVERETT DAM, NEAR EAST WEARE, NH

LOCATION.--Lat 43°05'29", long 71°39'36", Hillsborough County, Hydrologic Unit 01070002, on right bank 500 ft (150 m) downstream from Everett Dam and 1.4 mi (2.3 km) southeast of East Weare.

DRAINAGE AREA.--63.1 mi^2 (163.4 km^2).

PERIOD OF RECORD.--March 1963 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 320 ft (98 m), from topographic map.

REMARKS.--Records good except those for periods of no gage-height record Jan. 4 to Feb. 5, Feb. 9 to Mar. 13, which are fair. Flow regulated by Everett Lake (Reservoirs in Merrimack River basin). Diversion from Hopkinton Lake on Contoocook River to Everett Lake during periods of high flow in the spring of 1968, 1969, 1977, and 1979. Occasional regulation by small reservoirs upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--17 years, 94.1 ft^3/s (2.665 m^3/s), 20.25 in/yr (520 mm/yr), adjusted for storage and diversion.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,530 ft^3/s (43.3 m^3/s) May 1, 1969, gage height, 8.73 ft (2.661 m); no flow for part of Aug. 27, Nov. 18, 1964, Oct. 22, 1968, Oct. 4, 1978, caused by unusual regulation; minimum daily discharge, 0.39 ft^3/s (0.011 m^3/s) Sept. 6, 1968.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,080 ft^3/s (30.6 m^3/s) Mar. 24, gage height, 8.04 ft (2.45 m); minimum daily, 3.1 ft^3/s (0.088 m^3/s) July 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	96	92	94	44	12	192	226	16	33	9.1	4.9
2	126	88	85	89	44	12	179	207	8.9	37	43	4.9
3	148	152	79	90	44	12	168	175	8.2	35	48	6.4
4	226	236	75	49	26	10	179	142	20	29	37	6.7
5	251	209	72	45	12	10	250	130	25	24	28	6.7
6	252	170	69	40	10	10	221	113	25	22	25	6.7
7	259	143	71	40	10	10	181	119	31	18	26	6.4
8	260	131	75	40	13	12	163	134	29	17	22	5.4
9	252	116	72	40	16	30	144	140	27	21	18	4.9
10	244	113	68	40	10	130	221	129	24	22	16	4.6
11	241	126	64	40	10	140	337	116	22	22	14	4.1
12	211	128	63	40	10	150	359	115	22	23	15	4.1
13	240	125	60	45	10	84	344	87	22	22	16	3.8
14	244	118	60	40	10	73	337	69	22	18	14	3.6
15	244	112	62	40	10	65	327	63	20	15	13	3.6
16	246	105	60	62	9.0	54	313	59	28	14	11	3.6
17	244	99	65	62	10	50	303	43	34	13	9.5	3.6
18	236	90	87	60	10	100	238	36	33	13	8.2	4.3
19	182	84	87	60	10	158	171	34	28	11	7.8	4.6
20	148	80	78	60	10	168	146	32	24	10	7.4	4.6
21	131	77	70	55	10	173	130	29	24	10	7.8	4.6
22	118	74	60	55	10	70	116	29	26	9.5	7.8	4.6
23	107	72	62	55	12	184	111	26	24	29	7.8	4.3
24	101	70	63	55	15	671	107	25	21	3.1	7.4	3.8
25	101	69	71	50	17	860	100	25	19	3.6	6.7	3.6
26	113	74	149	50	19	453	105	24	16	3.8	6.4	5.4
27	101	106	228	45	13	271	107	21	14	4.1	6.1	8.6
28	90	117	195	45	13	238	94	19	12	4.1	5.7	8.6
29	85	109	140	40	12	224	121	18	10	4.6	5.7	7.1
30	81	100	120	40	---	238	201	18	17	6.4	5.4	6.1
31	78	---	102	30	---	262	---	17	---	7.1	5.2	---
TOTAL	5395	3389	2704	1596	449.0	4934	5965	2420	652.1	504.3	460.0	154.2
MEAN	174	113	87.2	51.5	15.5	159	199	78.1	21.7	16.3	14.8	5.14
MAX	260	236	228	94	44	860	359	226	34	37	48	8.6
MIN	35	69	60	30	9.0	10	94	17	8.2	3.1	5.2	3.6
MEAN†	174	113	87.2	49.2	16.4	162	200	73.6	22.2	16.0	14.7	5.14
CFSM†	2.77	1.79	1.38	.780	.260	2.57	3.17	1.18	.352	.254	.233	.081
IN†	3.20	2.01	1.59	.90	.28	2.97	3.53	1.34	.39	.29	.27	.09

CAL YR 1979 TOTAL 50509.1 MEAN 138 MAX 1340 MIN 3.1 MEAN† 139 CFSM† 2.20 IN† 29.83
WTR YR 1980 TOTAL 28622.6 MEAN 78.2 MAX 860 MIN 3.1 MEAN† 78.4 CFSM† 1.24 IN† 16.88

† Adjusted for change in contents in Everett Lake.

01092000 MERRIMACK RIVER NEAR GOFFS FALLS, BELOW MANCHESTER, NH

LOCATION.--Lat 42°56'54", long 71°27'52", Hillsborough County, Hydrologic Unit 01070002, on right bank 600 ft (200 m) upstream from bridge on Interstate Highway 193, 0.8 mi (1.3 km) downstream from Bowman Brook, 1.3 mi (2.1 km) north of Goffs Falls, and 2.3 mi (3.7 km) downstream from Piscataquog River.

DRAINAGE AREA.--3,092 mi^2 (8,008 km^2).

PERIOD OF RECORD.--Discharge: October 1936 to current year. October 1936 monthly discharge only, published in WSP 1301.

Water-quality records: Water years 1952-53, 1957, 1971.

REVISED RECORDS.--WSP 1231: 1937. WSP 1271: 1937(M, m).

GAGE.--Water-stage recorder. Datum of gage is 109.27 ft (33.305 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for periods of no gage-height record, Mar. 5 to Apr. 11, Sept. 16-30, which are fair. Flow regulated by powerplants, by Franklin Falls Reservoir since 1942, and by Squam, Newfound, Winnipesaukee, Winnisquam, and other lakes and reservoirs upstream (Reservoirs in Merrimack River basin). Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--44 years, 5,246 ft^3/s (148.6 m^3/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 102,500 ft^3/s (2,900 m^3/s) Sept. 23, 1938, gage height, 25.87 ft (7.885 m), from rating curve extended above 48,000 ft^3/s (1,400 m^3/s) on basis of computations of flow over dam at gage heights 25.87 ft (7.885 m) and 35.19 ft (10.726 m); minimum daily, 98 ft^3/s (2.78 m^3/s) Oct. 11, 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1722, 150,000 ft^3/s (4,250 m^3/s) Mar. 20, 1936, gage height, 35.19 ft (10.726 m), from floodmarks, from rating curve extended above 48,000 ft^3/s (1,400 m^3/s) by method explained above.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 22,000 ft^3/s (620 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Apr. 12	0445	*28900	818	10.45	3.185						

Minimum daily discharge, 517 ft^3/s (14.6 m^3/s) July 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2170	3500	6570	5660	1550	1500	10300	12200	2130	1610	697	851
2	3890	3180	5840	4480	1600	1250	9000	11100	2410	1740	967	800
3	4670	3460	5310	3350	1700	1350	8000	9670	2030	2160	1520	671
4	6050	5320	4840	2810	1800	1050	7900	8730	3290	2090	1010	829
5	8620	7480	4120	3840	1250	1150	9000	7900	2990	1880	1160	1320
6	9190	6630	4500	2970	1300	1200	9800	7160	2800	1590	980	870
7	10800	5840	3900	2810	1730	1800	8700	6530	2890	1970	758	1040
8	10500	5600	4200	2760	1520	2000	7500	6750	2760	1000	1180	1010
9	8270	4630	4500	2620	1570	1300	6600	7340	2170	1490	1020	822
10	7060	4540	4000	2740	1380	1800	11500	7180	1990	1500	748	732
11	6710	4760	4200	2710	1470	3800	27000	6570	2110	1480	691	813
12	6040	5210	3880	3180	1270	3900	28500	5790	2130	1220	787	720
13	6080	5160	3600	3480	1310	3700	24600	5120	1580	988	695	731
14	7290	5070	3680	3800	1200	3800	20100	4490	1680	1300	935	586
15	7710	4440	3750	4110	1050	2300	18700	5050	1850	1180	658	973
16	6580	3730	3090	3560	1150	2200	18800	4640	1820	1010	1110	1300
17	6230	3650	3490	3510	1160	2600	18800	4510	1730	1080	877	1550
18	5690	3600	2360	3520	971	3400	14800	4090	1610	927	898	1600
19	5050	2950	4200	3210	867	5500	12100	3500	1620	837	585	1700
20	4720	3380	3380	2930	1470	7200	10400	4370	1900	1140	797	940
21	4510	3630	3550	2750	1330	8000	9480	4440	1320	1190	738	1300
22	4360	3090	3160	2580	1250	10000	9260	4600	1630	682	699	1700
23	4030	3080	3670	3210	1370	11000	8800	3700	2610	695	668	1500
24	3590	3110	3320	2750	1360	11500	7650	3420	2300	629	756	880
25	3830	3510	3990	2300	1540	12000	6600	3220	2190	545	791	730
26	4000	3320	8440	2400	1440	10200	6830	2800	1700	517	806	1430
27	4200	5080	11600	1700	1100	10000	8040	2400	1100	654	707	1150
28	3600	12000	9790	2200	1200	9000	8910	2100	1410	913	750	1300
29	3000	10500	8060	2250	1350	8500	9010	2000	1200	733	730	1730
30	2900	7700	7090	2030	---	9000	9910	1990	1500	596	634	1720
31	2800	---	6070	1650	---	11000	---	1870	---	648	735	---
TOTAL	174140	147150	152150	93870	39258	163000	366590	165230	60450	35994	26087	33298
MEAN	5617	4905	4908	3028	1354	5258	12220	5330	2015	1161	842	1110
MAX	10800	12000	11600	5660	1800	12000	28500	12200	3290	2160	1520	1730
MIN	2170	2950	2360	1650	867	1050	6600	1870	1100	517	585	586

CAL YR 1979 TOTAL 2288235 MEAN 6269 MAX 35000 MIN 772
WTR YR 1980 TOTAL 1457217 MEAN 3981 MAX 28500 MIN 517

01093800 STONY BROOK TRIBUTARY NEAR TEMPLE, NH

LOCATION.--Lat 42°51'36", long 71°50'00", Hillsborough County, Hydrologic Unit 01070002, on left bank 150 ft (45 m) downstream from highway bridge, 2.9 mi (4.7 km) north of Temple, and 5.5 mi (8.8 km) upstream from mouth.

DRAINAGE AREA.--3.60 mi² (9.32 km²).

PERIOD OF RECORD.--May 1963 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 920 ft (280 m), from topographic map.

REMARKS.--Records fair except those for winter period, which are poor. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--17 years, 6.82 ft³/s (0.193 m³/s), 25.73 in/yr (654 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 336 ft³/s (9.52 m³/s) Mar. 13, 1977, gage height, 7.13 ft (2.173 m), from rating curve extended above 90 ft³/s (2.6 m³/s); maximum gage height, 7.81 ft (2.380 m) Feb. 3, 1970, Dec. 21, 1973, backwater from ice; no flow for part of Sept. 26, 1976.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 110 ft³/s (3.1 m³/s) and maximums (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 3	1915	156	4.418	6.07	1.850	Apr. 10	--	*227	6.429	6.55	1.996

Minimum discharge, 0.12 ft³/s (0.003 m³/s) Aug. 9-11, Sept. 8-14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	5.5	8.0	6.3	2.7	1.7	13	13	2.5	5.4	.68	.32
2	32	5.3	7.7	6.0	2.8	1.7	11	13	4.0	4.0	.56	.28
3	37	29	7.3	5.7	2.9	1.6	12	11	5.4	2.5	.40	.28
4	35	18	7.0	5.5	3.0	1.6	31	9.5	6.6	1.8	.40	.28
5	18	11	6.8	5.3	3.2	1.6	28	8.7	2.7	2.1	.36	.24
6	33	9.0	6.8	5.1	3.4	1.7	14	8.2	2.7	3.0	.51	.24
7	18	8.2	8.7	5.0	3.5	1.8	12	9.2	3.4	2.0	.36	.20
8	13	8.0	7.7	4.8	3.4	2.2	11	14	2.8	1.7	.28	.16
9	14	7.3	7.0	4.7	3.3	2.5	11	11	2.3	2.4	.20	.12
10	12	9.2	6.6	4.5	3.2	2.0	82	9.0	2.0	1.7	.12	.12
11	11	9.0	6.6	5.7	3.1	2.6	43	8.2	1.5	1.3	1.5	.12
12	16	10	6.6	14	3.0	2.0	25	7.5	2.3	1.2	4.6	.12
13	21	9.0	6.4	16	2.9	1.4	21	7.3	2.0	1.0	1.6	.12
14	14	9.7	5.9	6.6	2.8	1.3	18	7.0	1.3	.80	1.0	.16
15	11	9.7	6.8	5.5	2.7	1.2	22	6.4	1.7	.68	.87	.20
16	9.5	8.7	5.9	5.3	2.6	1.2	19	5.9	.93	.62	.68	.20
17	8.7	8.2	5.7	5.0	2.5	1.1	14	5.3	.74	.56	.51	.20
18	8.5	8.0	5.5	4.7	2.5	20	13	5.5	.60	.56	.40	1.2
19	7.7	7.5	5.3	4.4	2.4	15	11	5.5	.50	.45	.51	.51
20	7.0	7.3	5.2	4.2	2.3	11	10	4.8	.80	.45	.56	.40
21	6.6	7.0	5.1	4.0	2.2	20	9.2	4.4	3.0	.40	.87	.36
22	6.6	6.6	5.0	3.8	2.1	35	8.5	3.7	2.0	.28	.74	.32
23	6.6	6.6	7.0	3.7	2.0	19	8.0	3.7	1.6	.28	.68	.24
24	7.5	6.4	11	3.5	2.0	21	8.0	9.2	1.3	.28	.45	.20
25	7.3	6.4	18	3.3	1.9	19	7.5	3.0	1.1	.24	.36	.20
26	6.4	11	15	3.2	1.9	13	7.7	2.6	.80	.20	.36	1.2
27	6.4	19	9.5	3.1	1.8	12	7.5	2.4	.60	.28	.28	.62
28	5.9	12	8.0	3.0	1.8	12	8.7	2.1	.40	.45	.28	.45
29	6.2	10	7.3	2.9	1.8	15	24	2.1	.50	1.2	.28	.40
30	5.9	8.7	7.0	2.8	---	20	18	1.8	4.0	1.9	.28	.40
31	5.7	---	6.7	2.7	---	17	---	2.8	---	.93	.28	---
TOTAL	414.5	291.3	233.1	160.3	75.7	278.2	528.1	207.8	62.07	40.66	20.96	9.86
MEAN	13.4	9.71	7.52	5.17	2.61	8.97	17.6	6.70	2.07	1.31	.68	.33
MAX	37	29	18	16	3.5	35	82	14	6.6	5.4	4.6	1.2
MIN	5.7	5.3	5.0	2.7	1.8	1.1	7.5	1.8	.40	.20	.12	.12
CFSM	3.72	2.70	2.09	1.44	.73	2.49	4.89	1.86	.58	.36	.19	.09
IN.	4.28	3.01	2.41	1.66	.78	2.87	5.46	2.15	.64	.42	.22	.10

CAL YR 1979 TOTAL 3463.42 MEAN 9.49 MAX 75 MIN .22 CFSM 2.64 IN 35.78
WTR YR 1980 TOTAL 2322.55 MEAN 6.35 MAX 82 MIN .12 CFSM 1.76 IN 23.99

01096507 NASHUA RIVER AT NASHUA, NH

LOCATION.--Lat 42°45'49", long 71°27'19", Hillsborough County, Hydrologic Unit 07020002, on downstream side of Canal Street Bridge in Nashua, and 0.5 mi (0.8 km) upstream from mouth.

PERIOD OF RECORD.--Water years 1979 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	SPECIFIC CONDUCTANCE (MICROMHOS)	PH FIELD (UNITS)	TEMPERATURE, WATER (DEG C)	TURBIDITY (NTU)	COLOR (PLATINUM COBALT UNITS)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, CHEMICAL (HIGH LEVEL) (MG/L)	C.O.D. TOTAL IN BOTTOM MATERIAL (MG/KG)
APR										
08...	0850	95	6.2	7.4	.50	5	12.3	102	15	--
29...	0915	133	6.3	10.0	1.8	5	11.7	103	19	12000
MAY										
13...	1000	123	6.5	15.2	3.0	8	9.9	98	15	--
27...	0930	151	6.6	18.0	1.2	10	10.1	106	23	--
JUN										
17...	1030	186	6.7	20.0	.15	5	9.1	99	26	--
25...	0900	231	6.6	22.0	.50	5	8.8	100	20	--
JUL										
14...	0930	161	6.7	23.0	.60	8	8.6	99	16	23000
29...	0950	266	6.8	24.8	2.9	9	8.2	98	15	--
AUG										
19...	0900	246	6.8	21.6	2.0	8	8.5	96	23	--
26...	0900	247	7.0	21.2	1.5	10	9.5	106	16	--
SEP										
09...	0930	326	6.8	20.9	.30	5	10.2	113	18	--

DATE	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L)	SOLIDS, VOLATILE IN BOTTOM MATERIAL (MG/KG)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS NH4)
APR										
08...	K420	980	--	--	0	68	--	.40	.240	.29
29...	170	K68	14	18	13	90	3640	.51	.270	.33
MAY										
13...	K50	27	--	--	10	81	--	.42	.220	.27
27...	62	40	--	--	5	105	--	.62	.130	.16
JUN										
17...	120	180	--	--	7	120	--	1.1	.290	.35
25...	350	130	--	--	8	149	--	1.1	.410	.50
JUL										
14...	930	75	12	23	10	104	15600	.67	.160	.19
29...	97	149	--	--	13	136	--	.76	.330	.40
AUG										
19...	K33	330	--	--	2	136	--	1.1	.040	.05
26...	77	54	--	--	6	135	--	1.2	.080	.10
SEP										
09...	101	50	--	--	5	178	--	1.3	.240	.29

DATE	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS NO3)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, TOTAL (MG/L AS PO4)	PHENOLS (UG/L)	CHLOR-A PHYTOPLANKTON CHROMO FLUOROM (UG/L)	CHLOR-B PHYTOPLANKTON CHROMO FLUOROM (UG/L)	OIL AND GREASE, TOTAL RECOV. GRAVIMETRIC (MG/L)
APR										
08...	.13	.37	.77	3.4	.080	.25	--	5.45	.000	1
29...	.47	.74	1.3	5.5	.110	.34	1	10.8	.070	0
MAY										
13...	.40	.62	1.0	4.6	.120	.37	--	14.1	1.42	0
27...	.45	.58	1.2	5.3	.140	.43	--	20.6	3.93	0
JUN										
17...	.54	.83	1.9	8.5	.140	.43	--	27.6	4.70	0
25...	.53	.94	2.0	9.0	.090	.28	--	38.4	8.84	0
JUL										
14...	.50	.66	1.3	5.9	.110	.34	3	9.87	7.74	1
29...	.46	.79	1.6	6.9	.130	.40	--	10.6	2.86	0
AUG										
19...	.91	.95	2.1	9.1	.130	.40	--	32.0	3.69	0
26...	.70	.78	2.0	8.8	.060	.18	--	37.2	3.47	1
SEP										
09...	.47	.71	2.0	8.9	.090	.28	--	15.7	2.96	2

K, NON-IDEAL COLONY COUNT.

MERRIMACK RIVER BASIN

01096507 NASHUA RIVER AT NASHUA, NH--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	ARSENIC TOTAL (UG/L AS AS)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, RECOV. FM BOT-TOM MA-TERIAL (UG/G)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	SELE-NIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)
APR											
08...	--	--	--	20	--	--	--	--	--	--	--
29...	2	1	20	20	8	620	6	100	.1	0	3
MAY											
13...	--	--	--	10	--	--	--	--	--	--	--
27...	--	--	--	20	--	--	--	--	--	--	--
JUN											
17...	--	--	--	10	--	--	--	--	--	--	--
25...	--	--	--	20	--	--	--	--	--	--	--
JUL											
14...	3	0	20	10	3	570	4	180	<.1	0	10
29...	--	--	--	20	--	--	--	--	--	--	--
AUG											
19...	--	--	--	10	--	--	--	--	--	--	--
26...	--	--	--	10	--	--	--	--	--	--	--
SEP											
09...	--	--	--	10	--	--	--	--	--	--	--

DATE	PCB TOTAL (UG/L)	NAPH-THA-LENES, POLY-CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR-DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI-ELDRIN TOTAL (UG/L)	ENDO-SULFAN, TOTAL (UG/L)
APR									
29...	.10	.0	.00	.0	.00	.00	.00	.00	.00
JUL									
14...	.40	.0	.00	.0	.00	.00	.00	.00	.00

DATE	ENDRIN, TOTAL (UG/L)	HEPTA-CHLOR, TOTAL (UG/L)	HEPTA-CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	METH-OXY-CHLOR, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PER-THANE TOTAL (UG/L)	TOX-APHENE, TOTAL (UG/L)
APR								
29...	.00	.00	.00	.00	.00	.00	.00	0
JUL								
14...	.00	.00	.00	.00	.00	.00	.00	0

01096508 MERRIMACK RIVER AT NASHUA, NH

LOCATION.--Lat 42°45'48", long 71°26'36", Hillsborough County, Hydrologic Unit 01070002, on upstream side of Taylor Falls Bridge at east limits of Nashua, 50 ft (15 m) from left bank, and 0.3 mi (0.5 km) downstream from Nashua River.

DRAINAGE AREA.--3,480 mi^2 (9,013 km^2), approximately.

PERIOD OF RECORD.--Water years 1974 to current year.

REMARKS.--When sampling, an attempt is made to exclude Nashua River water.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPER-ATURE, WATER (DEG C)	TUR-BID-ITY (NTU)	COLOR (PLAT-INUM COBALT UNITS)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	C.O.D. TOTAL IN BOTTOM MA-TERIAL (MG/KG)
APR										
08...	0930	40	5.9	5.2	.40	5	12.8	100	18	--
29...	1030	46	5.8	8.7	1.5	5	11.5	99	6	24000
MAY										
13...	1045	57	5.7	14.5	1.1	4	9.7	95	13	--
27...	1030	61	5.8	17.0	.03	10	9.4	97	13	--
JUN										
17...	1130	77	5.9	20.5	.50	5	8.5	94	19	--
25...	1000	86	5.6	22.4	.30	5	8.1	92	12	--
JUL										
14...	1030	79	5.6	22.7	.65	13	8.0	92	10	9000
29...	1100	99	6.1	26.4	.60	8	8.3	102	12	--
AUG										
19...	1030	118	6.3	22.5	.90	10	8.4	96	29	--
26...	1015	123	6.5	23.6	.40	40	9.5	111	9	--
SEP										
09...	1045	107	6.5	7.0	.20	0	8.7	71	13	--

DATE	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L)	SOLIDS, VOLA-TILE IN BOTTOM MA-TERIAL (MG/KG)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS NH4)
APR										
08...	580	150	--	--	0	38	--	.17	.070	.08
29...	1170	390	6.6	8.5	11	41	19800	.21	.040	.05
MAY										
13...	1400	260	--	--	7	48	--	.21	.110	.13
27...	1200	45	--	--	0	70	--	.23	.100	.12
JUN										
17...	3100	29	--	--	4	77	--	.33	.170	.21
25...	650	110	--	--	1	59	--	.28	.140	.17
JUL										
14...	180	K3	6.3	13	16	61	5960	.38	.090	.11
29...	177	46	--	--	5	71	--	.29	.100	.12
AUG										
19...	260	40	--	--	0	68	--	.32	.060	.07
26...	133	K18	--	--	6	69	--	.44	.130	.16
SEP										
09...	212	58	--	18	1	67	--	.30	.110	.13

DATE	ARSENIC TOTAL (UG/L AS AS)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, RECOV. FM BOT-TOM MA-TERIAL (UG/G)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	SELE-NIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)
APR											
29...	1	0	20	40	4	360	2	40	.1	0	10
MAY											
13...	--	--	--	10	--	--	--	--	--	--	--
27...	--	--	--	30	--	--	--	--	--	--	--
JUN											
17...	--	--	--	10	--	--	--	--	--	--	--
25...	--	--	--	20	--	--	--	--	--	--	--
JUL											
14...	2	0	20	10	2	310	0	40	<.1	0	10
29...	--	--	--	20	--	--	--	--	--	--	--
AUG											
19...	--	--	--	10	--	--	--	--	--	--	--
26...	--	--	--	10	--	--	--	--	--	--	--
SEP											
09...	--	--	--	10	--	--	--	--	--	--	--

K, NON-IDEAL COLONY COUNT.

01096508 MERRIMACK RIVER AT NASHUA, NH--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS NO3)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, TOTAL (MG/L AS PO4)	PHENOLS (UG/L)	CHLOR-A PHYTOPLANKTON CHROMO FLUOROM (UG/L)	CHLOR-B PHYTOPLANKTON CHROMO FLUOROM (UG/L)	OIL AND GREASE, TOTAL RECOV. GRAVIMETRIC (MG/L)
APR										
08...	.54	.61	.78	3.5	.030	.09	--	1.64	.000	2
29...	.21	.25	.46	2.0	.130	.40	1	2.35	.000	0
MAY										
13...	.67	.78	.99	4.4	.070	.21	--	1.91	.000	0
27...	.22	.32	.55	2.4	.040	.12	--	7.24	.580	0
JUN										
17...	.23	.40	.73	3.2	.100	.31	--	8.36	.440	2
25...	.20	.34	.62	2.7	.070	.21	--	8.15	1.14	0
JUL										
14...	.27	.36	.74	3.3	.070	.21	2	6.66	.000	1
29...	.28	.38	.67	3.0	.120	.37	--	21.2	5.49	0
AUG										
19...	.53	.59	.91	4.0	.130	.40	--	20.7	4.03	0
26...	.32	.45	.89	3.9	.110	.34	--	8.30	1.40	1
SEP										
09...	.16	.27	.57	2.5	.120	.37	--	10.8	1.56	2

DATE	PCB TOTAL (UG/L)	NAPHTHALENES, POLYCHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLORDANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DIELDRIN TOTAL (UG/L)	ENDOSULFAN, TOTAL (UG/L)
APR									
29...	.00	.0	.00	.0	.00	.00	.00	.00	.00
JUL									
14...	.00	.0	.00	.0	.00	.00	.00	.00	.00

DATE	ENDRIN, TOTAL (UG/L)	HEPTACHLOR, TOTAL (UG/L)	HEPTACHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	METHOXYCHLOR, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PERTHANE TOTAL (UG/L)	TOXAPHENE, TOTAL (UG/L)
APR								
29...	.00	.00	.00	.00	.00	.00	.00	0
JUL								
14...	.00	.00	.00	.00	.00	.00	.00	0

RESERVOIRS IN MERRIMACK RIVER BASIN

01077500 NEWFOUND LAKE on Newfound River, 1.7 mi (2.7 km) north of Bristol, NH, used for recreation and for storage of water for power, has usable capacity of 1,690,000,000 ft^3 (47,900,000 m^3). Records furnished by New Hampshire Water Resources Board.

01078500 FRANKLIN FALLS RESERVOIR on Pemigewasset River, 2 mi (3 km) north of Franklin, NH, completed in 1942, used for flood control, has usable capacity of 6,700,000,000 ft^3 (190,000,000 m^3). Records furnished by Corps of Engineers.

01080000 LAKE WINNIPESAUKEE on Winnipesaukee River (see station 01080000).

01082500 EDWARD MACDOWELL RESERVOIR on Nubanusit Brook, at West Peterborough, NH, 2 mi (3 km) northwest of Peterborough, completed in 1950, used for flood control, has usable capacity of 558,000,000 ft^3 (15,800,000 m^3). Records furnished by Corps of Engineers.

01085400 HOPKINTON LAKE on Contoocook River, at West Hopkinton, NH, completed in 1962, used for flood control and recreation, has usable capacity of 3,084,000,000 ft^3 (87,340,000 m^3). Records furnished by Corps of Engineers.

01086500 BLACKWATER RESERVOIR on Blackwater River, at Swett's Mills, 1 mi (2 km) south of Webster, NH, completed in 1941, used for flood control, has usable capacity of 2,004,000,000 ft^3 (56,750,000 m^3). Records furnished by Corps of Engineers.

01090700 EVERETT LAKE on Piscataquog River, 1.3 mi (2.1 km) southeast of East Weare, NH, completed in 1962, used for flood control and recreation, has usable capacity of 3,768,000,000 ft^3 (106,700,000 m^3). Records furnished by Corps of Engineers.

Hopkinton and Everett Lakes, connected by a canal, are operated as a unit above elevation 400.00 ft (121.920 m). Diversion from Hopkinton Lake to Everett Lake in March 1968, April 1969, and March 1977.

MONTHEND USABLE CONTENTS, IN MILLIONS OF CUBIC FEET, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

	Newfound Lake	Franklin Falls Reservoir	Edward MacDowell Reservoir
Sept. 30, 1979	1035	119.8	4.9
Oct. 31	971	117.6	13.7
Nov. 30	1028	156.8	17.5
Dec. 31	1174	132.9	10.8
Jan. 31, 1980	1026	113.3	13.0
Feb. 29	965	115.4	15.9
Mar. 31	1306	235.2	38.6
Apr. 30	1333	237.8	26.7
May 31	1373	117.6	5.5
June 30	1350	119.8	8.6
July 31	1259	113.3	6.1
Aug. 31	1174	84.9	5.5
Sept. 30	1044	108.9	7.3

	Hopkinton Lake	Blackwater Reservoir	Everett Lake
Sept. 30, 1979	16.0	.3	47.5
Oct. 31	23.5	1.0	49.8
Nov. 30	48.4	2.8	50.9
Dec. 31	55.0	1.2	50.9
Jan. 31, 1980	14.4	1.0	47.5
Feb. 29	9.8	.5	47.0
Mar. 31	49.6	12.9	55.5
Apr. 30	54.8	2.8	57.2
May 31	37.5	.5	45.3
June 30	15.2	.3	46.4
July 31	14.7	.2	45.8
Aug. 31	11.9	.1	45.3
Sept. 30	10.7	.2	45.3

01127880 BIG BROOK NEAR PITTSBURG, NH

LOCATION.--Lat 45°08'06", long 71°12'23", Coos County, Hydrologic Unit 01080101, on left bank 10 ft (3 m) downstream from culvert on U.S. Highway 3, 0.3 mi (0.5 km) upstream from mouth, and 11 mi (18 km) northeast of Pittsburg.

DRAINAGE AREA.--6.36 mi^2 (16.47 km^2).

PERIOD OF RECORD.--December 1963 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,680 ft (512 m), from topographic map.

REMARKS.--Records good except those for winter period and period of no gage-height record, Feb. 5 to Apr. 21, which are poor. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--16 years (water years 1965-80), 15.9 ft^3/s (0.450 m^3/s), 33.95 in/yr (862 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 441 ft^3/s (12.5 m^3/s) May 3, 1967, gage height, 3.61 ft (1.100 m), from rating curve extended above 110 ft^3/s (3.1 m^3/s); maximum gage height, 5.02 ft (1.530 m) Dec. 27, 1969, ice jam; minimum discharge, about 0.90 ft^3/s (0.025 m^3/s) about Aug. 20, 21, 1975.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 180 ft^3/s (5.1 m^3/s) and maximums (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Jan. 15	0600	ice jam		*3.73	1.137	Apr. 10	--	*200	5.7	unknown	

Minimum discharge not determined; minimum daily, 1.3 ft^3/s (0.037 m^3/s) Mar. 2, 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.8	11	15	6.5	2.9	1.4	10	31	4.9	11	8.0	9.2
2	2.8	13	14	6.1	2.7	1.3	9.4	28	4.9	9.6	7.2	27
3	2.6	40	15	5.9	2.6	1.3	9.0	24	8.0	8.8	6.8	19
4	2.6	35	12	5.6	2.4	1.4	10	20	13	6.8	7.2	11
5	2.6	22	8.6	6.6	2.3	1.4	8.2	17	11	6.4	5.6	8.4
6	6.8	18	8.5	8.4	2.2	1.5	7.4	15	8.4	14	4.9	7.2
7	4.3	15	8.4	6.5	2.1	1.5	7.0	19	6.8	8.8	5.2	5.6
8	4.3	14	9.6	5.4	2.1	1.6	8.0	19	8.4	7.2	5.6	4.3
9	4.0	12	22	4.8	2.0	1.6	10	31	15	8.8	27	4.6
10	4.3	13	11	4.4	2.0	1.7	150	28	12	6.8	11	4.6
11	4.3	13	9.8	5.2	2.0	1.6	70	23	11	5.6	7.2	4.6
12	4.6	11	7.8	30	1.9	1.6	34	21	8.8	4.9	20	4.3
13	7.6	10	9.2	15	1.9	1.5	39	18	8.0	7.6	20	4.0
14	9.2	9.6	14	11	1.9	1.5	30	17	6.8	15	13	52
15	8.0	9.2	17	9.0	2.0	1.5	86	16	6.0	12	10	58
16	8.0	8.4	6.4	7.4	2.0	1.5	60	16	6.0	16	11	25
17	7.2	8.4	8.8	6.8	2.0	1.6	40	13	5.2	11	15	18
18	10	7.2	7.0	6.1	1.9	15	25	14	4.6	9.2	12	50
19	10	13	5.2	5.0	1.9	12	17	25	4.0	7.2	11	29
20	10	6.4	5.8	3.5	1.8	8.0	30	20	3.8	5.6	10	21
21	11	10	6.2	3.1	1.7	6.8	45	16	5.6	6.8	8.8	18
22	10	13	6.6	3.4	1.8	6.0	35	14	7.2	18	7.2	15
23	9.2	16	7.0	3.6	1.8	5.6	31	12	5.2	32	6.0	21
24	27	14	8.0	3.8	1.7	5.2	39	11	4.3	24	4.9	23
25	31	16	26	4.0	1.6	4.7	52	9.6	3.8	15	4.6	18
26	19	17	24	3.6	1.5	4.3	79	8.4	4.6	12	4.0	30
27	15	58	15	3.5	1.5	4.1	60	7.6	31	18	3.8	50
28	13	31	11	3.4	1.4	5.0	43	6.4	16	12	5.2	32
29	13	21	9.2	3.1	1.4	6.0	37	6.0	10	12	3.8	24
30	13	18	8.2	3.1	---	8.0	33	5.2	10	11	3.0	18
31	13	---	7.2	3.0	---	11	---	4.9	---	10	5.2	---
TOTAL	290.2	503.2	343.5	196.8	57.0	127.2	1114.0	516.1	254.3	353.1	274.2	615.8
MEAN	9.36	16.8	11.1	6.35	1.97	4.10	37.1	16.6	8.48	11.4	8.85	20.5
MAX	31	58	26	30	2.9	15	150	31	31	32	27	58
MIN	2.6	6.4	5.2	3.0	1.4	1.3	7.0	4.9	3.8	4.9	3.0	4.0
CFSM	1.47	2.64	1.75	1.00	.31	.65	5.83	2.61	1.33	1.79	1.39	3.22
IN.	1.70	2.94	2.01	1.15	.33	.74	6.51	3.02	1.49	2.06	1.60	3.60

CAL YR 1979 TOTAL 6460.3 MEAN 17.7 MAX 290 MIN 1.2 CFSM 2.78 IN 37.78
WTR YR 1980 TOTAL 4645.4 MEAN 12.7 MAX 150 MIN 1.3 CFSM 2.00 IN 27.17

01128500 CONNECTICUT RIVER AT FIRST CONNECTICUT LAKE, NEAR PITTSBURG, NH

LOCATION.--Lat 45°05'14", long 71°17'34", Coos County, Hydrologic Unit 01080101, on right bank 0.2 mi (0.3 km) downstream from dam at First Connecticut Lake, 6 mi (10 km) northeast of Pittsburg, and at mile 392.0 (630.7 km).

DRAINAGE AREA.--83.0 mi^2 (215.0 km^2).

PERIOD OF RECORD.--April 1917 to current year.

REVISED RECORDS.--WSP 756: Drainage area. WSP 1001: 1931-39. WSP 1231: 1921-23(M), 1925-26.

GAGE.--Water-stage recorder. Altitude of gage is 1,560 ft (475 m), from topographic map. Prior to Jan. 1, 1918, discharge computed from flow through gates at dam 0.2 mi (0.3 km) upstream. Jan. 1 to July 28, 1918, non-recording gage at present site and datum.

REMARKS.--Records good. Flow completely regulated by First Connecticut and Second Connecticut Lakes (Reservoirs in Connecticut River basin). Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--63 years, 197 ft^3/s (5.579 m^3/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,200 ft^3/s (204 m^3/s) June 16, 1943, gage height, 6.25 ft (1.905 m), from rating curve extended above 1,900 ft^3/s (54 m^3/s) on basis of computation of flow over dam at gage height 6.12 ft (1.865 m); maximum gage height, 6.35 ft (1.935 m) May 5, 1925, backwater from logging operations; minimum daily discharge, 3.1 ft^3/s (0.088 m^3/s) Mar. 17, 18, 1929.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 352 ft^3/s (9.97 m^3/s) Sept. 7, gage height, 2.79 ft^3/s (0.850 m^3/s); minimum daily, 10 ft^3/s (0.28 m^3/s) Mar. 26-31, Aug. 5-8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	266	154	308	163	330	113	11	14	15	142	215	148
2	310	154	308	215	329	113	11	14	16	142	216	148
3	309	156	308	254	328	113	11	14	16	142	215	148
4	309	157	308	254	326	113	11	14	17	142	215	148
5	308	157	307	252	325	113	10	14	17	142	216	148
6	308	157	306	252	324	112	10	14	18	142	216	225
7	307	157	225	252	250	112	10	14	17	142	216	310
8	306	157	160	251	216	111	10	106	18	142	216	308
9	306	157	160	251	215	112	11	255	19	142	217	308
10	305	157	160	250	215	112	11	305	19	142	217	309
11	305	157	160	294	215	111	11	304	16	142	216	308
12	304	157	160	328	148	113	11	292	14	219	216	307
13	304	157	158	329	113	112	11	81	15	259	217	305
14	303	157	206	327	113	110	11	13	15	258	216	305
15	302	157	306	327	113	111	11	13	15	258	216	307
16	301	157	305	327	113	111	11	13	24	257	216	307
17	303	157	306	326	113	110	11	13	30	257	216	307
18	301	157	306	325	113	111	11	13	30	159	215	308
19	204	157	305	324	113	110	11	13	30	159	215	308
20	154	157	303	324	113	110	11	13	38	159	214	308
21	154	157	238	324	113	110	12	13	42	159	213	308
22	154	157	163	322	113	110	11	14	42	159	176	308
23	154	157	162	333	113	110	11	14	49	162	148	308
24	154	157	161	339	113	66	11	14	53	162	148	306
25	154	157	163	339	113	11	11	14	53	213	148	304
26	154	157	163	338	113	10	13	15	54	213	148	305
27	154	157	163	336	113	10	13	15	55	213	148	306
28	154	159	163	335	113	10	13	16	55	213	148	305
29	154	160	163	335	113	10	13	16	55	216	148	305
30	154	259	163	332	---	10	13	16	102	216	148	304
31	154	---	164	331	---	10	---	15	---	216	148	---
TOTAL	7509	4810	6931	9289	5142	2700	337	1694	959	5689	6037	8329
MEAN	242	160	224	300	177	87.1	11.2	54.6	32.0	184	195	278
MAX	310	259	308	339	330	113	13	305	102	259	217	310
MIN	154	154	158	163	113	10	10	13	14	142	148	148

CAL YR 1979 TOTAL 58030.4 MEAN 159 MAX 613 MIN 8.7
WTR YR 1980 TOTAL 59426.0 MEAN 162 MAX 339 MIN 10

01129200 CONNECTICUT RIVER BELOW INDIAN STREAM, NEAR PITTSBURG, NH

LOCATION.--Lat 45°02'25", long 71°26'37", Coos County, Hydrologic Unit 01080101, on right bank 1,200 ft (350 m) downstream from Indian Stream, 2.5 mi (4.0 km) west of Pittsburg, and at mile 376.5 (605.8 km).

DRAINAGE AREA.--254 mi^2 (658 km^2).

PERIOD OF RECORD.--Discharge: October 1956 to current year.

REVISED RECORDS.--WDR MA-NH-RI-VT-73-1: 1958, 1960(M), 1969(M).

GAGE.--Water-stage recorder. Altitude of gage is 1,150 ft (351 m), from topographic map.

REMARKS.--Records good. Flow regulated by First Connecticut and Second Connecticut Lakes and Lake Francis 3.7 mi (6.0 km) upstream (Reservoirs in Connecticut River basin). Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--24 years, 569 ft^3/s (16.11 m^3/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,080 ft^3/s (116 m^3/s) Nov. 29, 1959, gage height, 7.07 ft (2.155 m), from rating curve extended above 2,600 ft^3/s (74 m^3/s); minimum daily, 30 ft^3/s (0.85 m^3/s) Aug. 6, 1965.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,470 ft^3/s (41.6 m^3/s) Apr. 11, gage height, 4.42 ft (1.347 m); minimum daily, 68 ft^3/s (1.93 m^3/s) June 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	345	264	671	419	809	239	354	295	70	386	541	294
2	345	266	646	533	809	270	368	268	69	354	536	500
3	345	470	623	588	809	241	402	239	68	352	533	512
4	345	490	618	566	812	195	381	214	245	338	369	367
5	345	417	616	554	817	195	302	186	228	327	133	327
6	348	499	609	553	783	236	233	168	172	341	125	372
7	349	466	618	547	560	315	213	206	134	320	230	461
8	349	448	617	547	405	339	226	226	100	293	515	450
9	352	437	576	547	401	339	332	228	234	292	539	445
10	354	450	585	544	400	336	917	250	189	291	228	445
11	354	471	584	684	396	339	1310	213	160	283	303	445
12	355	442	602	926	291	340	851	192	135	349	619	445
13	373	425	662	969	202	346	1120	173	119	410	775	445
14	419	416	685	942	202	356	786	164	95	461	675	553
15	405	409	749	1030	202	348	807	161	70	450	635	584
16	404	404	759	1050	202	336	791	149	80	472	622	405
17	398	395	760	957	203	335	432	135	100	454	668	642
18	412	394	721	914	205	257	344	130	133	436	616	809
19	432	380	709	889	209	157	269	226	102	424	596	858
20	413	387	703	865	217	155	282	214	80	413	584	844
21	418	432	558	864	231	187	438	170	148	416	571	809
22	314	471	359	856	220	223	321	147	191	461	456	682
23	215	498	361	847	199	232	279	130	189	660	294	603
24	242	467	375	843	199	210	298	120	185	576	286	628
25	456	475	583	837	199	114	384	110	148	553	282	565
26	331	473	1120	826	209	106	631	100	143	553	282	354
27	277	682	717	809	284	103	661	94	329	588	278	425
28	251	433	554	803	196	118	436	88	244	591	282	495
29	244	369	507	797	238	166	369	83	193	433	278	430
30	263	626	491	808	---	262	321	78	253	198	273	559
31	284	---	448	816	---	341	---	74	---	394	278	---
TOTAL	10737	13256	19186	23730	10909	7736	14858	5231	4606	12869	13402	15753
MEAN	346	442	619	765	376	250	495	169	154	415	432	525
MAX	456	682	1120	1050	817	356	1310	295	329	660	775	858
MIN	215	264	359	419	196	103	213	74	68	198	125	294

CAL YR 1979 TOTAL 186900 MEAN 512 MAX 2030 MIN 79
WTR YR 1980 TOTAL 152273 MEAN 416 MAX 1310 MIN 68

01129300 HALLS STREAM NEAR EAST HEREFORD, QUEBEC
(International gaging station)

LOCATION.--Lat 45°02'41", long 71°29'54", Compton County, on right bank opposite Alain's farm, 2.5 mi (4.0 km) downstream from East Hereford, and 3.7 mi (6.0 km) upstream from mouth.

DRAINAGE AREA.--85 mi^2 (220 km^2).

PERIOD OF RECORD.--Discharge: October 1962 to current year in reports of Geological Survey. October 1948 to September 1962 available from Water Survey of Canada, Department of the Environment.

GAGE.--Water-stage recorder. Altitude of gage is 1,090 ft (332 m), from topographic map. Prior to Dec. 13, 1962, nonrecording gage at same site and datum.

REMARKS.--Records good except those for winter period, which are fair. Several observations of water temperature and specific conductance were made during the year.

COOPERATION.--This station is maintained by Canada under agreement with the United States.

AVERAGE DISCHARGE.--32 years, 169 ft^3/s (4.786 m^3/s), 27.00 in/yr (686 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,500 ft^3/s (127 m^3/s) June 30, 1973, gage height, 13.07 ft (3.984 m); minimum daily, 4 ft^3/s (0.11 m^3/s) Sept. 10, 1960.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in June 1943 reached a discharge of 21,000 ft^3/s (590 m^3/s) by slope-area method at site 0.5 mi (0.8 km) downstream.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,000 ft^3/s (56.6 m^3/s) Apr. 10, gage height, unknown; minimum daily, 6.6 ft^3/s (0.19 m^3/s) Feb. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	104	143	120	23	14	513	200	36	61	68	66
2	15	101	127	114	21	14	409	177	40	53	60	260
3	15	418	102	96	20	14	369	157	45	54	49	131
4	15	314	99	92	18	14	351	135	254	44	45	72
5	14	189	98	100	17	14	260	115	145	34	33	50
6	20	148	94	89	16	13	485	104	88	42	27	42
7	24	123	136	70	13	12	188	160	61	38	34	34
8	24	114	120	66	12	11	237	193	53	30	36	28
9	29	103	82	63	11	10	751	177	114	30	402	25
10	33	142	84	63	11	10	1490	175	78	29	125	24
11	35	143	78	66	12	11	905	143	68	24	74	22
12	42	106	114	754	13	12	686	127	55	22	176	21
13	100	93	221	594	11	12	936	109	48	22	252	22
14	112	86	123	563	10	13	600	102	38	20	132	174
15	78	82	96	813	9.0	14	957	97	32	21	103	266
16	86	75	103	599	14	15	499	93	30	28	92	109
17	80	72	105	389	13	13	527	80	26	29	100	74
18	86	78	80	203	11	13	551	77	23	26	70	224
19	84	64	99	120	10	105	363	192	21	21	62	137
20	69	70	133	98	10	175	196	138	20	17	70	96
21	73	153	86	75	11	152	318	100	28	18	54	80
22	74	139	78	65	11	158	225	84	101	113	43	69
23	60	141	65	58	10	165	213	73	51	228	36	119
24	102	113	90	57	6.6	171	219	64	43	154	30	119
25	185	135	899	50	9.0	144	236	57	40	81	25	85
26	120	127	770	41	12	122	609	50	30	54	23	142
27	94	719	327	37	10	142	528	45	307	89	21	242
28	82	341	216	33	11	208	334	39	129	90	24	160
29	84	222	184	30	12	219	256	39	72	56	25	115
30	142	173	167	28	---	372	224	31	57	136	23	97
31	133	---	135	25	---	485	---	30	---	120	24	---
TOTAL	2125	4888	5254	5571	367.6	2847	14435	3363	2133	1784	2338	3105
MEAN	68.5	163	169	180	12.7	91.8	481	108	71.1	57.5	75.4	104
MAX	185	719	899	813	23	485	1490	200	307	228	402	266
MIN	14	64	65	25	6.6	10	188	30	20	17	21	21
CFSM	.81	1.92	1.99	2.12	.15	1.08	5.66	1.27	.84	.68	.89	1.22
IN.	.93	2.14	2.30	2.44	.16	1.25	6.32	1.47	.93	.78	1.02	1.36

CAL YR 1979 TOTAL 58101.0 MEAN 159 MAX 2410 MIN 7.5 CFSM 1.87 IN 25.43
WTR YR 1980 TOTAL 48210.6 MEAN 132 MAX 1490 MIN 6.6 CFSM 1.55 IN 21.10

01129500 CONNECTICUT RIVER AT NORTH STRATFORD, NH

LOCATION.--Lat 44°44'56", long 71°37'50", Coos County, Hydrologic Unit 01080101, on left bank at North Stratford, 400 ft (100 m) downstream from Nulhegan River, and at mile 344.5 (554.3 km).

DRAINAGE AREA.--799 mi^2 (2,069 km^2).

PERIOD OF RECORD.--Discharge: August 1930 to current year.
Water-quality records: Water year 1957.

REVISED RECORDS.--WSP 781: 1934(M). WSP 891: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 880.17 ft (268.276 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for winter period which are fair. Flow regulated by powerplants and by First Connecticut and Second Connecticut Lakes and Lake Francis (Reservoirs in Connecticut River basin) 36 mi (58 km) upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--50 years, 1,578 ft^3/s (44.69 m^3/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28,700 ft^3/s (813 m^3/s) June 16, 1943, gage height, 14.67 ft (4.471 m) from rating curve extended above 15,000 ft^3/s (420 m^3/s); maximum gage height, 20.60 ft (6.279 m) Mar. 6, 1979, from floodmark in gage well (ice jam); minimum daily discharge, 108 ft^3/s (3.06 m^3/s) Sept. 29, 1960.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,030 ft^3/s (227 m^3/s) Apr. 11, gage height, 7.90 ft (2.408 m); from peak-stage indicator; minimum daily discharge, 308 ft^3/s (8.72 m^3/s) June 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	536	1040	1700	1100	990	350	2080	2100	458	893	945	719
2	531	990	1560	1120	970	380	2100	1920	515	794	961	1330
3	533	2500	1380	1220	950	340	2150	1710	521	760	906	1550
4	535	2840	1370	1050	950	330	2050	1530	761	663	882	980
5	531	1810	1340	880	970	335	1700	1330	1050	575	571	780
6	905	1570	1300	850	930	350	1550	1220	793	579	403	710
7	864	1410	1420	840	760	410	1380	1970	606	585	478	690
8	718	1270	1450	820	690	415	1350	2190	555	514	573	698
9	726	1190	1160	800	670	410	1600	2280	832	637	1670	682
10	732	1320	1180	830	600	405	6200	2330	827	575	1140	682
11	745	1540	1150	980	520	395	7800	1820	676	494	640	675
12	792	1310	1400	1400	420	450	6600	1560	542	452	885	683
13	1070	1170	1500	1950	390	475	6000	1360	516	552	1970	676
14	1260	1090	1700	1880	360	480	5400	1250	447	586	1530	1060
15	1090	1040	1520	1950	340	480	5100	1180	400	635	1300	2150
16	1040	990	1420	2200	330	485	4000	1110	450	632	1160	1140
17	976	936	1400	1950	325	490	3000	958	429	687	1200	1080
18	958	946	1050	1750	320	470	2200	916	367	742	1110	1840
19	1020	874	1000	1600	330	640	2250	2220	328	624	1000	1810
20	956	881	980	1500	345	860	2420	1760	308	571	1060	1530
21	992	1110	920	1350	370	1020	2520	1310	390	582	994	1390
22	1040	1260	820	1280	355	1050	1980	1080	568	836	914	1350
23	856	1330	860	1200	345	1100	1690	919	554	1550	676	1460
24	990	1250	2440	1150	340	1080	1750	816	429	1760	552	1540
25	1770	1240	3210	1100	355	1100	2010	734	392	1130	520	1220
26	1390	1400	4430	1040	390	960	3710	650	365	925	502	1300
27	1060	4070	3000	1020	410	1400	4380	603	624	1130	492	1320
28	902	3020	1880	1010	345	1050	2990	555	858	1340	558	1430
29	884	1980	1570	1010	345	1100	2420	522	564	1000	544	1150
30	1070	1740	1580	1000	---	1800	2260	488	494	763	495	1010
31	1160	---	1300	1000	---	2050	---	465	---	813	507	---
TOTAL	28632	45117	48990	38830	15415	22660	92640	40856	16619	24379	27138	34635
MEAN	924	1504	1580	1253	532	731	3088	1318	554	786	875	1155
MAX	1770	4070	4430	2200	990	2050	7800	2330	1050	1760	1970	2150
MIN	531	874	820	800	320	330	1350	465	308	452	403	675

CAL YR 1979 TOTAL 571221 MEAN 1565 MAX 11700 MIN 204
WTR YR 1980 TOTAL 435911 MEAN 1191 MAX 7800 MIN 308

01130000 UPPER AMMONOOSUC RIVER NEAR GROVETON, NH

LOCATION.--Lat 44°37'30", long 71°28'10", Coos County, Hydrologic Unit 01080101, on left bank 75 ft (23 m) upstream from highway bridge, 0.2 mi (0.3 km) downstream from Nash Stream, and 2.8 mi (4.5 km) northeast of Groveton.

DRAINAGE AREA.--232 mi^2 (601 km^2).

PERIOD OF RECORD.--Discharge: August 1940 to current year.
Water-quality records: Water year 1955.

GAGE.--Water-stage recorder. Altitude of gage is 920 ft (280 m), from topographic map.

REMARKS.--Records poor. Prior to May 21, 1969, some regulation by pond 9 mi (14 km) upstream on Nash Stream. Small diversion upstream for municipal supply of Berlin. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--40 years, 473 ft^3/s (13.40 m^3/s), 27.69 in/yr (703 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,100 ft^3/s (683 m^3/s) May 20, 1969, gage height, 12.01 ft (3.661 m) in gage well, 12.85 ft (3.917 m), from floodmarks, from rating curve extended above 5,600 ft^3/s (160 m^3/s) on basis of contracted-opening measurement of peak flow, caused by failure of dam on Nash Stream; minimum, 32 ft^3/s (0.91 m^3/s) Sept. 14, 1948.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1936 reached a stage of about 10.6 ft (3.23 m), from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge 2,140 ft^3/s (60.6 m^3/s) Apr. 11, gage height, 5.04 ft (1.536 m); maximum gage height, 6.51 ft (1.984 m) March 19, ice jam; minimum daily discharge, 48 ft^3/s (1.36 m^3/s) Mar. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	100	233	387	145	68	49	280	878	199	254	233	242
2	107	233	360	135	66	49	265	862	210	254	376	398
3	113	527	322	130	64	48	250	813	233	331	336	371
4	172	744	290	125	62	49	240	759	291	246	322	287
5	221	481	270	125	60	51	225	684	295	182	278	202
6	282	403	260	145	58	53	210	628	258	199	262	166
7	331	371	280	135	57	55	200	837	229	176	331	135
8	246	336	220	125	56	57	230	829	246	146	266	116
9	221	308	150	115	55	59	628	921	304	195	304	104
10	210	350	170	105	55	60	1380	1050	278	176	270	109
11	199	403	190	130	54	59	1940	790	266	138	202	104
12	206	350	210	750	54	57	1570	700	246	123	262	107
13	313	322	230	650	55	53	1720	636	225	125	345	102
14	360	299	170	325	55	52	1560	591	199	120	278	246
15	304	287	125	260	56	50	1290	541	179	116	274	541
16	274	274	135	210	56	51	1350	501	185	133	237	360
17	250	254	150	185	57	53	870	456	179	120	214	287
18	225	250	120	170	58	200	752	444	160	135	185	365
19	242	217	100	145	57	300	684	613	149	116	179	365
20	237	217	120	110	56	220	684	576	138	102	206	299
21	274	250	145	84	56	190	973	481	158	104	199	282
22	282	278	160	82	55	170	837	432	202	179	166	345
23	262	299	170	88	55	160	737	387	176	475	146	527
24	299	291	190	94	54	145	752	350	149	409	125	576
25	469	287	350	98	54	135	813	326	138	317	113	403
26	387	376	500	90	54	130	1340	308	123	229	107	521
27	326	729	300	86	53	125	1460	291	95	371	102	628
28	287	660	250	82	50	145	1020	274	91	432	111	469
29	270	488	210	77	50	180	862	254	85	308	111	387
30	270	432	180	74	---	330	862	225	93	291	100	341
31	262	---	165	70	---	300	---	206	---	282	118	---
TOTAL	8001	10949	6879	5145	1640	3635	25984	17643	5779	6784	6758	9385
MEAN	258	365	222	166	56.6	117	866	569	193	219	218	313
MAX	469	744	500	750	68	330	1940	1050	304	475	376	628
MIN	100	217	100	70	50	48	200	206	85	102	100	102
CFSM	1.11	1.57	.96	.72	.24	.50	3.73	2.45	.83	.94	.94	1.35
IN.	1.28	1.76	1.10	.82	.26	.58	4.17	2.83	.93	1.09	1.08	1.50
(†)	2.69	2.78	3.56	3.04	3.43	3.94	2.84	2.33	3.1	2.28	2.15	1.66

CAL YR 1979 TOTAL 175553 MEAN 481 MAX 4550 MIN 40 CFSM 2.07 IN 28.15
WTR YR 1980 TOTAL 108582 MEAN 297 MAX 1940 MIN 48 CFSM 1.28 IN 17.41

† Diversion, in cubic feet per second, for municipal supply of Berlin; records furnished by City of Berlin.

01131500 CONNECTICUT RIVER NEAR DALTON, NH

LOCATION.--Lat 44°24'36", long 71°43'16", Coos County, Hydrologic Unit 01080101, on left bank 250 ft (76 m) upstream from highway bridge, 1,200 ft (350 m) downstream from dam of Gilman Paper Co., 1.2 mi (1.9 km) downstream from Dalton, and at mile 300.1 (482.9 km).

DRAINAGE AREA.--1,514 mi^2 (3,921 km^2).

PERIOD OF RECORD.--Discharge: March 1927 to current year. Published as "at Waterford, Vt." 1927-35. Records published for both sites January to September 1935.
Water-quality records: Water years 1953, 1971.

REVISED RECORDS.--WSP 891: Drainage area. WSP 1231: 1935. WSP 1301: 1928-35(M).

GAGE.--Water-stage recorder. Datum of gage is 799.89 ft (243.806 m) National Geodetic Vertical Datum of 1929. Prior to Sept. 30, 1935, nonrecording gage at bridge 10.5 mi (16.9 km) downstream at mean sea level. Jan. 1, 1935, to June 29, 1937, nonrecording gage at bridge 250 ft (76 m) downstream at present datum. Since June 2, 1961, auxiliary water-stage recorder 10.8 mi (17.4 km) downstream from base gage. July 11, 1956, to June 1, 1961, auxiliary nonrecording gage read hourly at same site.

REMARKS.--Records good except those for winter period and period of no gage-height record, May 18 to July 9, which are fair. Flow regulated by powerplants and by First Connecticut and Second Connecticut Lakes, Lake Francis (Reservoirs in Connecticut River basin), and other reservoirs. These reservoirs have a combined usable capacity of about 8,300,000,000 ft^3 (240,000,000 m^3). Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--53 years, 2,900 ft^3/s (82.13 m^3/s), adjusted to drainage area at present site.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 48,300 ft^3/s (1,370 m^3/s) Mar. 20, 1936, gage height, 25.6 ft (7.80 m); minimum daily, 115 ft^3/s (3.26 m^3/s) Oct. 3, 1937.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 11,410 ft^3/s (323 m^3/s) Apr. 12, gage height, 14.59 ft (4.447 m); minimum daily, 465 ft^3/s (13.2 m^3/s) Mar. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	876	1670	2810	2020	1200	500	4550	4580	1130	1140	1530	1190
2	814	1600	2540	1900	1190	510	4540	4310	1160	1370	1790	1760
3	814	2230	2280	2080	1180	515	4450	3940	1290	1670	2140	2500
4	855	5060	2170	1740	1170	500	4460	3650	1440	1600	2030	2280
5	918	4420	2080	1320	1170	480	4100	3180	1790	1520	1920	1630
6	1220	3080	2020	1200	1190	470	3320	2870	1880	1450	1690	1360
7	1700	2670	2030	1200	1250	465	2810	4100	1560	1380	1200	939
8	1560	2330	2270	1180	1200	475	2740	5140	1400	1320	1240	1080
9	1050	2100	2090	1160	1020	490	3030	5040	1440	1230	1240	1050
10	1200	2030	1790	1120	750	510	6200	5820	1810	1180	1890	918
11	1270	2370	1710	1190	680	580	10700	4800	1580	911	1760	918
12	1080	2440	1810	1740	680	640	11100	3920	1240	855	1260	1120
13	1340	2130	2360	3230	700	650	9730	3480	1090	862	1830	827
14	1680	1920	2560	3050	600	640	9790	2660	807	766	2380	1100
15	1840	1810	1960	2990	540	640	8270	2690	793	1080	2070	3670
16	1730	1520	1720	3630	520	660	8440	2610	841	800	1890	3390
17	1630	1520	1980	3360	490	705	6990	2400	876	1050	1650	2210
18	1540	1530	2040	2870	480	807	4660	2280	946	953	1360	2150
19	1430	1500	1710	2610	480	1360	3670	2930	800	1080	1520	3220
20	1530	1400	1400	2410	530	1840	3070	4270	807	953	1440	2680
21	1500	1450	1360	2190	540	1930	3840	3400	911	779	1440	2310
22	1500	1690	1350	1840	560	1960	4490	2690	1040	989	1350	2280
23	1560	1900	1360	1480	550	2030	3520	2300	1050	2150	1010	3300
24	1510	1990	1360	1450	530	2580	3320	1930	855	3030	982	4070
25	1910	1960	1880	1500	520	2520	3460	1720	807	2660	925	2840
26	2600	2150	4270	1350	510	2170	4940	1470	773	2020	827	3220
27	2140	3920	5600	1300	500	1830	7960	1470	759	1900	821	3850
28	1770	6000	4420	1350	510	2010	6900	1440	841	2120	752	3170
29	1580	4320	3190	1330	500	2420	5350	1400	1030	2200	759	2520
30	1540	3200	2780	1300	---	3830	4780	1190	925	1800	827	2260
31	1630	---	2470	1250	---	4550	---	1150	---	1880	827	---
TOTAL	45317	73910	71370	58340	21740	41267	165180	94830	33671	44698	44350	65812
MEAN	1462	2464	2302	1882	750	1331	5506	3059	1122	1442	1431	2194
MAX	2600	6000	5600	3630	1250	4550	11100	5820	1880	3030	2380	4070
MIN	814	1400	1350	1120	480	465	2740	1150	759	766	752	827

CAL YR 1979 TOTAL 1039697 MEAN 2848 MAX 19200 MIN 388
WTR YR 1980 TOTAL 760485 MEAN 2078 MAX 11100 MIN 465

01134500 MOOSE RIVER AT VICTORY, VT

LOCATION.--Lat 44°30'42", long 71°50'13", Essex County, Hydrologic Unit 01080102, on right bank at Victory, 2.7 mi (4.3 km) upstream from highway bridge.

DRAINAGE AREA.--75.2 mi^2 (194.7 km^2).

PERIOD OF RECORD.--January 1947 to current year.
Water-quality records: Water year 1957.

REVISED RECORDS.--WSP 1381: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,103.99 ft (336.496 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Records good except those for winter period, which are fair, and period of no gage-height record, Oct. 30 to Dec. 7, which are poor.

AVERAGE DISCHARGE.--33 years, 141 ft^3/s (3.993 m^3/s), 25.46 in/yr (647 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,340 ft^3/s (123 m^3/s) July 1, 1973, gage height, 12.04 ft (3.670 m); minimum, 2.6 ft^3/s (0.10 m^3/s) Aug. 21, 22, 1975.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,000 ft^3/s (28 m^3/s) and maximums (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Apr. 10	2300	*1460	41.3	8.48	2.585						

Minimum discharge, 11 ft^3/s (0.31 m^3/s) July 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	78	130	84	25	14	341	225	51	42	54	68
2	33	70	110	74	22	13	330	214	59	35	374	153
3	32	230	95	64	20	13	302	193	69	60	232	135
4	35	350	82	54	19	13	300	173	108	40	182	72
5	37	240	80	50	18	13	247	151	117	24	115	49
6	146	130	78	49	18	14	189	188	80	28	76	40
7	129	120	98	43	17	15	164	485	60	28	75	33
8	79	105	95	46	16	20	218	514	59	21	59	27
9	71	92	81	50	16	19	207	355	139	46	59	22
10	70	82	83	48	16	19	784	343	90	35	51	23
11	69	110	76	45	15	20	1190	252	72	23	37	23
12	70	100	87	150	14	19	746	208	61	20	70	22
13	138	90	168	349	14	18	606	178	52	21	129	22
14	152	80	115	160	14	17	554	163	44	21	75	120
15	106	71	83	286	14	17	446	147	37	17	115	587
16	97	65	86	332	14	16	520	131	39	18	84	365
17	84	59	93	185	14	16	294	113	37	19	70	133
18	76	60	69	110	14	25	211	109	31	17	52	202
19	71	56	60	90	14	55	169	295	27	15	42	170
20	67	57	66	85	15	270	168	249	25	12	47	106
21	72	60	70	62	15	195	259	169	31	13	43	117
22	81	70	66	54	14	155	202	135	38	41	35	243
23	76	78	64	45	14	145	163	111	31	260	29	348
24	94	84	66	40	14	130	170	99	25	168	25	371
25	185	86	200	37	14	120	190	88	24	80	22	188
26	124	130	496	34	14	110	317	76	20	45	20	309
27	94	360	320	32	13	98	497	68	17	159	19	414
28	81	430	170	31	14	115	318	61	17	265	22	235
29	80	260	135	30	14	200	247	57	15	93	27	162
30	85	170	110	28	---	363	231	52	17	69	21	131
31	90	---	94	27	---	444	---	50	---	59	27	---
TOTAL	2658	3973	3626	2774	455	2701	10580	5652	1492	1794	2288	4890
MEAN	85.7	132	117	89.5	15.7	87.1	353	182	49.7	57.9	73.8	163
MAX	185	430	496	349	25	444	1190	514	139	265	374	587
MIN	32	56	60	27	13	13	163	50	15	12	19	22
CFSM	1.14	1.76	1.56	1.19	.21	1.16	4.69	2.42	.66	.77	.98	2.17
IN.	1.31	1.97	1.79	1.37	.23	1.34	5.23	2.80	.74	.89	1.13	2.42

CAL YR 1979 TOTAL 57380 MEAN 157 MAX 1460 MIN 10 CFSM 2.09 IN 28.38
WTR YR 1980 TOTAL 42883 MEAN 117 MAX 1190 MIN 12 CFSM 1.56 IN 21.21

01135000 MOOSE RIVER AT ST. JOHNSBURY, VT

LOCATION.--Lat 44°25'22", long 72°00'02", Caledonia County, Hydrologic Unit 01080102, on left bank at St. Johnsbury 0.5 mi (0.8 km) upstream from mouth.

DRAINAGE AREA.--128 mi^2 (332 km^2).

PERIOD OF RECORD.--Discharge: August 1928 to current year.
Water-quality records: Water year 1955.

REVISED RECORDS.--WSP 1231: 1929-30, 1931-34(M). WSP 1381: Drainage area. WSP 1701: 1959.

GAGE.--Water-stage recorder. Altitude of gage is 585 ft (178 m), from topographic map. Prior to Nov. 16, 1934, nonrecording gage at site 0.2 mi (0.3 km) upstream at different datum.

REMARKS.--Records fair except those for winter period which are poor. No gage-height record, Dec. 20 to Feb. 14.

AVERAGE DISCHARGE.--52 years, 219 ft^3/s (6.202 m^3/s), 23.23 in/yr (590 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,820 ft^3/s (165 m^3/s) May 5, 1972, gage height, 4.23 ft (1.269 m); maximum gage height, 8.3 ft (2.53 m) Apr. 30, 1929, from graph based on gage readings, site and datum then in use; minimum discharge, 6.2 ft^3/s (0.18 m^3/s) Sept. 17, 18, 1948, Aug. 27, 28, 1949.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,630 ft^3/s (46.2 m^3/s) Apr. 10, gage height, 4.06 ft (1.237 m); no peak above base of 1,700 ft^3/s (48 m^3/s); maximum gage height, 4.49 ft (1.369 m) Mar. 29 (ice jam); minimum daily discharge, 16 ft^3/s (0.45 m^3/s) Mar. 3, 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48	111	166	130	32	18	500	301	70	153	75	72
2	47	102	151	115	29	17	439	291	78	79	405	148
3	46	277	115	100	27	16	418	267	96	75	362	183
4	47	467	113	90	25	16	386	241	202	71	220	106
5	49	281	113	80	24	17	392	213	216	45	166	66
6	111	180	110	74	23	18	277	241	146	43	113	52
7	177	148	120	70	22	20	236	577	108	42	96	45
8	106	133	127	74	21	25	281	678	105	37	82	38
9	85	118	81	80	20	24	272	497	177	49	65	33
10	85	118	79	78	21	25	1150	453	148	56	66	32
11	85	148	91	74	19	25	1550	356	120	39	51	31
12	87	133	110	400	18	25	1040	296	102	33	76	29
13	129	117	174	520	18	24	838	254	82	31	163	29
14	174	106	153	280	18	22	766	232	69	30	115	103
15	139	98	87	450	18	21	586	213	57	28	151	732
16	117	91	94	500	18	20	657	196	57	29	131	522
17	106	79	111	300	18	20	439	172	53	30	96	196
18	92	82	72	150	18	50	306	172	47	27	75	216
19	84	77	45	120	18	120	245	450	41	25	58	232
20	77	78	80	100	19	260	236	370	39	22	61	153
21	77	81	94	86	19	500	312	250	47	21	57	135
22	82	100	90	70	19	280	286	189	51	31	48	272
23	85	115	88	60	19	240	232	161	47	241	43	490
24	87	120	100	54	19	220	228	142	39	263	37	482
25	186	122	500	50	19	190	245	127	35	131	31	263
26	156	216	800	45	18	170	368	111	31	69	30	412
27	118	475	500	43	17	160	606	98	28	96	28	540
28	98	586	250	40	18	200	439	85	25	317	34	322
29	98	306	200	38	18	350	339	77	24	137	36	216
30	115	209	160	36	---	470	312	71	47	89	33	177
31	124	---	140	34	---	520	---	66	---	77	35	---
TOTAL	3117	5274	5114	4341	592	4083	14381	7847	2387	2416	3039	6327
MEAN	101	176	165	140	20.4	132	479	253	79.6	77.9	98.0	211
MAX	186	586	800	520	32	520	1550	678	216	317	405	732
MIN	46	77	45	34	17	16	228	66	24	21	28	29
CFSM	.79	1.38	1.29	1.09	.16	1.03	3.74	1.98	.62	.61	.77	1.65
IN.	.91	1.53	1.49	1.26	.17	1.19	4.18	2.28	.69	.70	.88	1.84

CAL YR 1979 TOTAL 83955 MEAN 230 MAX 2500 MIN 14 CFSM 1.80 IN 24.40
WTR YR 1980 TOTAL 58918 MEAN 161 MAX 1550 MIN 16 CFSM 1.26 IN 17.12

01135500 PASSUMPSIC RIVER AT PASSUMPSIC, VT

LOCATION.--Lat 44°21'56", long 72°02'23", Caledonia County, Hydrologic Unit 01080102, on right bank 0.7 mi (1.1 km) upstream from Water Andric, 1 mi (2 km) downstream from dam and village of Passumpsic, and 4.0 mi (6.4 km) upstream from mouth.

DRAINAGE AREA.--436 mi^2 (1.129 km^2).

PERIOD OF RECORD.--Discharge: October 1928 to current year. Monthly discharge only October 1928, published in WSP 1301.
Water-quality records: Water years 1953, 1967-74 (partial-record station).

REVISED RECORDS.--WSP 781: 1933(M). WSP 871: Drainage area. WSP 1231: 1929, 1930-31(M).

GAGE.--Water-stage recorder. Altitude of gage is 490 ft (149 m), from topographic map.

REMARKS.--Records good except those for winter period, which are fair. Low flow regulated by powerplants upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--52 years, 734 ft^3/s (20.79 m^3/s), 22.86 in/yr (581 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,200 ft^3/s (515 m^3/s) July 1, 1973, gage height, 23.49 ft (7.160 m), from rating curve extended above 14,000 ft^3/s (400 m^3/s) on basis of computation of flow over dam at gage height 21.23 ft (6.471 m); minimum daily, 13 ft^3/s (0.37 m^3/s) Sept. 12, 1948.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1780, about 31.5 ft (9.60 m) in November 1927, from information by local residents (discharge not determined).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 5,000 ft^3/s (140 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Apr. 11	0230	*5060	143	9.30	2.835						

Minimum discharge, 19 ft^3/s (0.54 m^3/s) June 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	205	465	578	580	195	100	2500	1010	292	524	393	344
2	210	405	552	480	185	100	2020	961	347	300	1290	749
3	185	927	470	520	175	98	1250	887	382	346	858	671
4	206	1230	437	440	165	105	1160	827	819	340	577	398
5	217	805	504	270	150	94	1220	730	1010	138	431	252
6	252	600	459	220	135	100	957	804	584	259	312	185
7	497	507	506	240	125	99	816	2030	488	223	289	183
8	364	490	498	210	130	96	1010	1870	403	164	269	151
9	307	438	395	235	115	120	950	1420	704	234	211	136
10	292	416	371	255	120	140	4120	1290	557	284	231	136
11	329	557	414	270	110	160	4280	1050	473	86	183	136
12	297	483	464	1520	105	120	2590	934	386	226	251	141
13	528	452	650	1100	110	105	2670	824	358	138	454	136
14	586	383	540	750	115	105	2060	767	289	128	311	315
15	464	381	560	1980	105	100	1800	723	253	154	476	1600
16	415	356	640	1280	110	105	2020	659	263	163	372	925
17	403	330	500	790	115	125	1290	613	276	186	243	517
18	351	324	400	560	110	900	1010	607	239	134	239	648
19	302	337	310	480	105	1900	855	1280	200	135	196	673
20	267	337	235	420	110	1370	825	1100	195	156	208	446
21	284	315	205	350	115	1250	1080	793	210	102	209	418
22	372	391	190	285	115	1570	967	661	313	156	180	840
23	359	456	250	280	110	1900	815	583	289	708	144	1190
24	364	456	350	270	110	1840	810	531	240	757	152	1050
25	854	456	2040	250	105	1600	857	478	206	446	115	658
26	605	868	2890	245	105	1320	1270	411	161	249	119	1010
27	442	2060	1630	240	110	1300	1670	396	136	461	121	1160
28	362	1440	910	235	110	1900	1240	337	172	802	125	790
29	418	921	670	225	105	2280	1070	307	134	399	164	584
30	505	730	610	215	---	3790	1050	314	120	358	104	487
31	468	---	660	205	---	3360	---	262	---	395	166	---
TOTAL	11710	18316	19888	15400	3575	28152	46232	25459	10499	9151	9393	16929
MEAN	378	611	642	497	123	908	1541	821	350	295	303	564
MAX	854	2060	2890	1980	195	3790	4280	2030	1010	802	1290	1600
MIN	185	315	190	205	105	94	810	262	120	86	104	136
CFSM	.87	1.40	1.47	1.14	.28	2.08	3.53	1.88	.80	.68	.70	1.29
IN.	1.00	1.56	1.70	1.31	.31	2.40	3.94	2.17	.90	.78	.80	1.44

CAL YR 1979 TOTAL 294245 MEAN 806 MAX 8290 MIN 65 CFSM 1.85 IN 25.11
WTR YR 1980 TOTAL 214704 MEAN 587 MAX 4280 MIN 86 CFSM 1.35 IN 18.32

01137500 AMMONOOSUC RIVER AT BETHLEHEM JUNCTION, NH

LOCATION.--Lat 44°16'08", long 71°37'52", Grafton County, Hydrologic Unit 01080101, on left bank 0.2 mi (0.3 km) upstream from Pierce Bridge and Bethlehem Junction, 0.8 mi (1.3 km) upstream from unnamed tributary entering from left, 3 mi (5 km) east of Bethlehem, 3.4 mi (5.5 km) downstream from Little River, and at mile 35.0 (56.3 km).

DRAINAGE AREA.--87.6 mi^2 (226.9 km^2).

PERIOD OF RECORD.--Discharge: August 1939 to current year.
Water-quality records: Water years 1967-74.

REVISED RECORDS.--WSP 1701: 1951(M), 1953-54(M).

GAGE.--Water-stage recorder. Datum of gage is 1,180.74 ft (359.890 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Records excellent except those for winter period, which are fair. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--41 years, 207 ft^3/s (5.862 m^3/s), 32.09 in/yr (815 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,800 ft^3/s (306 m^3/s) Oct. 24, 1959, gage height, 12.09 ft (3.685 m), from rating curve extended above 4,100 ft^3/s (116 m^3/s) on basis of slope-area measurement of peak flow; minimum, 16 ft^3/s (0.45 m^3/s) Nov. 14, 1952 (caused by anchor ice upstream).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,700 ft^3/s (76.5 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Apr. 10	0930	*3450	97.7	7.19	2.192						

Minimum discharge not determined, occurred during period of ice effect; minimum daily, 25 ft^3/s (0.71 m^3/s) Mar. 2, 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	58	111	197	74	41	26	145	546	95	190	66	83
2	71	111	177	70	40	25	135	519	102	120	75	73
3	71	671	149	66	38	25	130	418	115	110	75	155
4	257	490	145	64	37	26	150	354	225	86	80	93
5	138	267	135	68	35	27	115	247	240	74	65	72
6	467	210	130	80	34	28	105	237	165	72	59	65
7	236	184	150	74	33	29	100	476	126	68	154	58
8	162	167	100	68	32	30	110	344	120	66	82	53
9	139	149	78	58	32	30	180	315	154	83	58	49
10	126	182	94	53	31	31	2020	268	129	68	58	50
11	115	191	105	66	31	32	843	233	114	74	54	47
12	113	158	110	470	31	30	475	284	105	95	59	47
13	185	141	120	190	31	28	649	251	96	95	69	45
14	171	135	80	160	32	28	460	237	87	88	63	156
15	131	128	63	120	33	27	1190	200	81	69	68	321
16	122	119	73	105	33	27	659	179	101	68	60	163
17	110	112	77	96	32	27	304	169	81	77	62	110
18	120	110	57	88	32	220	237	192	74	85	56	208
19	128	102	50	66	31	160	197	453	73	64	53	169
20	120	101	62	52	31	120	211	286	73	56	62	119
21	130	120	80	44	30	98	462	215	106	55	57	102
22	122	123	84	50	30	86	275	191	162	63	51	109
23	116	163	88	52	29	80	230	178	106	100	48	100
24	180	137	105	54	29	76	298	163	88	121	45	94
25	292	129	300	56	29	72	420	150	80	87	43	83
26	193	155	250	51	28	66	959	134	72	69	42	264
27	154	1350	140	50	28	60	541	124	67	66	41	234
28	137	439	120	48	27	74	488	113	65	66	63	158
29	132	293	110	47	26	90	696	106	59	59	60	127
30	126	233	95	45	---	175	746	99	70	71	48	114
31	117	---	80	43	---	155	---	94	---	84	57	---
TOTAL	4739	6981	3604	2628	926	2008	13530	7775	3231	2549	1933	3521
MEAN	153	233	116	84.8	31.9	64.8	451	251	108	82.2	62.4	117
MAX	467	1350	300	470	41	220	2020	546	240	190	154	321
MIN	58	101	50	43	26	25	100	94	59	55	41	45
CFSM	1.75	2.66	1.32	.97	.36	.74	5.15	2.87	1.23	.94	.71	1.34
IN.	2.01	2.96	1.53	1.12	.39	.85	5.75	3.30	1.37	1.08	.82	1.50

CAL YR 1979 TOTAL 77485 MEAN 212 MAX 2730 MIN 32 CFSM 2.42 IN 32.90
WTR YR 1980 TOTAL 53425 MEAN 146 MAX 2020 MIN 25 CFSM 1.67 IN 22.69

01138000 AMMONOOSUC RIVER NEAR BATH, NH

LOCATION.--Lat 44°09'14", long 71°59'10", Grafton County, Hydrologic Unit 01080101, on left bank 0.4 mi (0.6 km) downstream from Wild Ammonoosuc River, 1.4 mi (2.3 km) southwest of Bath, and 3.3 mi (5.3 km) upstream from mouth.

DRAINAGE AREA.--395 mi^2 (1,023 km^2).

PERIOD OF RECORD.--Discharge: September 1935 to September 1980 (discontinued).
Water-quality records: Water year 1953.

REVISED RECORDS.--WSP 871: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 454.14 ft (138.422 m) National Geodetic Vertical Datum of 1929 (levels by Connecticut River Power Co.).

REMARKS.--Records poor. No gage-height record May 6 to July 10. Occasional diurnal fluctuation at low flow caused by small powerplants upstream, greater fluctuation prior to 1968. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--45 years, 649 ft^3/s (18.38 m^3/s), 22.31 in/yr (567 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,900 ft^3/s (790 m^3/s) Mar. 18, 1936, gage height, 15.40 ft (4.694 m), from rating curve extended above 13,000 ft^3/s (370 m^3/s) on basis of slope-area measurement at gage height 14.28 ft (4.353 m); maximum gage height, 17.55 ft (5.349 m) June 30, 1973; minimum daily discharge, 35 ft^3/s (0.99 m^3/s) Sept. 15, 1957.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 6,500 ft^3/s (180 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Apr. 10	1400	*7700	218	9.40	2.865						

Minimum daily discharge, 56 ft^3/s (1.59 m^3/s) Sept. 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	118	239	420	150	94	61	320	1570	220	440	143	161
2	120	234	370	145	90	59	300	1420	250	390	143	213
3	134	1100	310	135	86	58	280	1190	350	240	167	302
4	431	1540	320	130	84	59	270	1070	500	200	169	297
5	395	800	290	140	80	61	250	808	520	170	161	180
6	1100	474	280	165	78	63	230	600	380	160	156	150
7	699	434	320	135	75	65	220	900	330	150	177	136
8	418	389	210	130	74	66	250	760	270	160	251	117
9	342	351	170	120	72	67	500	640	320	180	136	100
10	312	357	190	110	70	68	5150	540	350	160	118	92
11	288	428	210	150	70	69	3370	520	300	144	112	71
12	263	376	240	1000	69	67	1820	650	260	111	114	61
13	395	333	260	430	70	64	1840	570	230	156	116	58
14	431	315	170	350	70	61	1590	530	200	180	114	56
15	342	305	135	270	76	60	2390	450	190	146	100	880
16	305	285	150	230	74	58	2100	390	225	150	116	600
17	273	254	165	210	72	57	1500	420	200	160	111	350
18	258	263	125	190	72	450	560	470	170	175	108	520
19	288	244	105	150	73	350	430	960	160	140	114	440
20	273	232	130	120	75	250	450	580	180	120	150	390
21	278	239	170	98	74	210	1000	460	230	115	126	280
22	276	261	180	110	70	190	600	410	380	135	97	255
23	266	330	190	115	69	180	500	380	250	200	99	276
24	325	342	220	120	69	165	640	340	200	379	93	249
25	670	320	400	125	67	155	880	320	180	305	83	206
26	460	441	640	120	66	145	2610	300	160	203	57	474
27	360	1870	300	115	65	130	3140	280	150	182	66	656
28	305	1000	270	110	64	150	1200	250	140	157	84	421
29	288	700	230	105	63	185	1600	240	135	143	120	325
30	250	500	200	100	---	370	2050	220	170	121	114	285
31	230	---	165	98	---	340	---	205	---	133	124	---
TOTAL	10893	14956	7535	5676	2131	4333	38040	18443	7600	5805	3839	8601
MEAN	351	499	243	183	73.5	140	1268	595	253	187	124	287
MAX	1100	1870	640	1000	94	450	5150	1570	520	440	251	880
MIN	118	232	105	98	63	57	220	205	135	111	57	56
CFSM	.89	1.26	.62	.46	.19	.35	3.21	1.51	.64	.47	.31	.73
IN.	1.03	1.41	.71	.53	.20	.41	3.58	1.74	.72	.55	.36	.81

CAL YR 1979 TOTAL 207605 MEAN 569 MAX 9290 MIN 59 CFSM 1.44 IN 19.55
WTR YR 1980 TOTAL 127852 MEAN 349 MAX 5150 MIN 56 CFSM .88 IN 12.04

01138500 CONNECTICUT RIVER AT WELLS RIVER, VT

LOCATION.--Lat 44°09'13", long 72°02'34", Orange County, Hydrologic Unit 01080101, on right bank at village of Wells River, 200 ft (61 m) downstream from bridge on U.S. Highway 302, 400 ft (100 m) upstream from Wells River, 1,200 ft (350 m) downstream from Ammonoosuc River, and at mile 266.0 (428.0 km).

DRAINAGE AREA.--2,644 mi^2 (6,848 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1949 to current year. October and November 1949 monthly discharge only, published in WSP 1301.

GAGE.--Water-stage recorder. Datum of gage is 399.75 ft (121.844 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for winter period, which are fair. Flow regulated by powerplants, by First Connecticut and Second Connecticut Lakes, Lake Francis, Moore and Comerford Reservoirs (Reservoirs in Connecticut River basin), and other reservoirs, combined usable capacity, about 14,800,000,000 ft^3 (419,000,000 m^3).

AVERAGE DISCHARGE.--31 years, 4,683 ft^3/s (133.0 m^3/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 57,100 ft^3/s (1,620 m^3/s) July 1, 1973, gage height, 17.35 ft (5.288 m), from peak-stage indicator; minimum daily, 152 ft^3/s (4.30 m^3/s) Aug. 28, 1960.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 19,300 ft^3/s (547 m^3/s) Apr. 11, gage height, 7.42 ft (2.262 m); minimum daily, 246 ft^3/s (6.97 m^3/s) Aug. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1630	1870	5900	2500	3400	600	6560	7580	1500	2300	2880	833
2	1220	2270	2850	2450	1600	620	4750	5830	3900	1880	3300	3370
3	1900	4490	4370	3150	880	2200	4280	5760	4000	1250	2070	3720
4	2080	5820	4980	3600	2400	2300	6080	3800	2900	791	3260	3210
5	2300	5220	4450	1950	2700	1750	5950	5090	4000	1550	4330	2810
6	1560	5170	4860	1950	2500	1390	3400	5390	3150	1210	3670	1590
7	1130	6680	3650	3500	2800	730	3170	6860	1600	1620	2220	435
8	2130	4800	2620	2150	2300	580	4240	9550	860	1800	2000	2040
9	2330	3320	1570	1600	460	590	3530	8770	2350	1900	1340	2420
10	2340	3960	1940	2640	680	2390	11000	8030	3000	2100	974	2510
11	2120	3570	2950	2080	1750	3000	15000	7120	3700	2650	1890	2430
12	2580	3040	2600	3330	2600	3300	17000	6420	3000	560	2520	1340
13	1180	3460	3340	2280	2400	2200	12700	6860	2400	600	2540	680
14	1810	3610	3600	2870	2100	2300	13900	5920	700	1700	2380	619
15	2510	2720	1750	4200	1200	750	13200	4340	1200	1600	3150	3370
16	2880	2750	1400	4200	450	400	12500	4660	2400	2800	1770	3640
17	2810	1720	3600	4700	320	1470	11400	3290	2400	2220	246	2970
18	2980	1450	3500	4600	350	3460	10300	3230	2550	579	2050	3680
19	2710	2360	4000	3900	1870	4720	4620	4870	1750	1270	2330	3250
20	2240	2990	3800	2050	2690	2970	2290	6570	1700	842	3280	2650
21	999	2940	2800	4250	2560	4900	3220	5090	933	2510	2390	996
22	1890	2080	1000	4350	2260	3750	4130	6110	505	3390	1970	3440
23	2500	1350	1050	3600	1600	5610	6030	5560	1600	1820	965	5460
24	3460	1860	1450	2740	400	4700	6880	3950	2070	2970	488	5470
25	4270	1540	2600	2700	1670	4930	6570	939	2190	2900	1410	5300
26	4100	4240	5500	1080	1560	4930	6360	1730	1520	1200	1980	5900
27	2100	8240	5400	980	2800	5090	10200	2610	1660	597	1560	6170
28	1950	7650	5800	2400	2600	4560	11800	2330	748	2990	1880	3810
29	2580	7100	4000	2800	1990	4170	11400	2830	430	3860	1780	3860
30	2730	6570	1300	2600	---	4840	10100	3000	1900	3320	1280	4380
31	2540	---	3050	2800	---	6310	---	1200	---	3170	770	---
TOTAL	71559	114840	101680	90000	52890	91510	242560	155289	62616	59949	64673	92353
MEAN	2308	3828	3280	2903	1824	2952	8085	5009	2087	1934	2086	3078
MAX	4270	8240	5900	4700	3400	6310	17000	9550	4000	3860	4330	6170
MIN	999	1350	1000	980	320	400	2290	939	430	560	246	435

CAL YR 1979 TOTAL 1680055 MEAN 4603 MAX 30000 MIN 250
WTR YR 1980 TOTAL 1199919 MEAN 3278 MAX 17000 MIN 246

01138500 CONNECTICUT RIVER AT WELLS RIVER, VT.--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1952, 1957, 1979 to current year.
PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1979 to September 1980.
WATER TEMPERATURE: October 1979 to September 1980.
INSTRUMENTATION.--Water-quality monitor since October 1979.
REMARKS.--Interruptions in the record were due to malfunctions of the instrument.
EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE (October 1979 to April 1980): Maximum recorded, 143 micromhos Mar. 11; minimum recorded, 34 micromhos Nov. 7, 9, 11, 12, 27.
WATER TEMPERATURE (October 1979 to August 1980): Maximum recorded, 22.5°C June 24; minimum recorded, 0.0°C on many days during February.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH FIELD (UNITS)	TEMPERATURE, WATER (DEG C)	TURBIDITY (NTU)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS (MG/L AS CACO3)
OCT 31...	1210	2410	85	6.9	9.0	1.0	11.4	98	220	45	30
NOV 27...	1145	10200	70	6.4	8.0	4.0	11.8	99	K570	K23	25
DEC 11...	1215	2820	96	6.6	2.5	1.0	13.6	100	95	20	37
JAN 09...	1200	1040	78	6.4	.5	.40	13.2	92	K92	45	27
FEB 11...	1145	E800	78	7.2	.0	.60	14.2	--	270	55	28
MAR 24...	1215	5020	80	6.7	2.0	1.5	14.2	--	300	230	30
APR 30...	1230	9400	43	6.3	5.3	1.8	13.1	--	K60	35	20
MAY 20...	1145	6970	65	6.7	10.6	1.6	11.4	--	240	40	28
JUN 24...	1215	3100	73	6.3	17.2	.35	9.1	--	70	21	29
JUL 16...	1120	800	90	6.8	19.7	1.2	8.6	--	380	66	32
AUG 27...	1215	661	80	6.3	20.3	.40	8.0	--	320	136	28
SEP 23...	1215	5830	82	6.6	18.3	.70	9.4	--	380	K10	32

DATE	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)
OCT 31...	5	9.9	1.2	5.3	1.0	25	7.2	4.3	.1	6.0	64
NOV 27...	2	8.5	1.0	3.7	1.0	23	6.8	4.1	.1	6.4	55
DEC 11...	3	13	1.2	4.3	1.0	34	8.7	5.1	.0	6.8	74
JAN 09...	12	8.5	1.3	4.9	.9	15	8.4	5.8	.1	7.5	54
FEB 11...	8	8.9	1.3	4.7	.9	20	9.0	5.8	.6	6.6	55
MAR 24...	10	9.9	1.2	5.2	1.8	20	8.2	7.1	.1	5.1	42
APR 30...	3	6.4	.9	2.4	.9	17	7.4	3.1	.1	4.5	48
MAY 20...	11	9.6	1.0	3.1	.8	17	8.1	3.7	.1	5.3	61
JUN 24...	8	9.8	1.0	3.4	1.0	21	7.3	4.5	.1	4.7	68
JUL 16...	7	11	1.2	4.8	1.1	25	7.8	7.5	.1	4.9	65
AUG 27...	7	9.0	1.3	4.6	1.0	21	7.8	5.9	.1	5.1	67
SEP 23...	12	11	1.2	3.6	.9	20	9.0	3.9	.1	5.5	93

K, NON-IDEAL COLONY COUNT.
E, ESTIMATED.

01138500 CONNECTICUT RIVER AT WELLS RIVER, VT.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)
OCT											
31...	51	.23	.23	.020	.050	.29	.46	.57	.48	.14	.34
NOV											
27...	46	.27	.23	.030	.010	.21	.48	.45	.51	.29	.22
DEC											
11...	62	.34	.30	.000	.010	.24	.22	.55	.22	.00	.25
JAN											
09...	48	.33	.35	.080	.030	.21	.36	.59	.44	.20	.24
FEB											
11...	51	.30	.29	.050	.050	.31	.38	.65	.43	.07	.36
MAR											
24...	53	.47	.49	.140	.140	.43	.15	1.1	.29	.00	.57
APR											
30...	38	.34	.38	.070	.070	.26	.11	.71	.18	.00	.33
MAY											
20...	45	.55	.62	.060	.020	1.1	.12	1.7	.18	.00	1.1
JUN											
24...	46	.29	.31	.040	.050	.13	.12	.49	.16	.00	.18
JUL											
16...	55	.22	.22	.040	.030	.28	.21	.53	.25	.00	.31
AUG											
27...	49	.28	.26	.060	.060	.18	.08	.50	.14	.00	.24
SEP											
23...	49	.45	.31	.000	.030	.14	.14	.48	.14	.00	.17

DATE	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, TOTAL (MG/L AS PO4)	PHOSPHORUS, DISSOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC SUSPENDED (MG/L AS C)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT										
31...	.71	.010	.03	.010	--	.3	5.2	0	2.0	100
NOV										
27...	.78	.060	.18	.010	7.6	--	--	63	1740	100
DEC										
11...	.56	.010	.03	.010	4.7	--	--	6	46	86
JAN										
09...	.77	.010	.03	.010	--	.3	4.1	4	11	75
FEB										
11...	.73	.030	.09	.020	4.1	--	--	3	--	100
MAR										
24...	.76	.090	.28	.050	5.6	--	--	27	366	79
APR										
30...	.52	.020	.06	.020	--	.4	4.3	4	102	80
MAY										
20...	.73	.020	.06	.010	4.0	--	--	5	94	95
JUN										
24...	.45	.020	.06	.010	3.0	--	--	2	17	100
JUL										
16...	.47	.010	.03	.000	--	.4	2.8	--	--	--
AUG										
27...	.42	.030	.09	.000	5.4	--	--	14	25	100
SEP										
23...	.59	.020	.06	.020	4.9	--	--	12	189	100

01138500 CONNECTICUT RIVER AT WELLS RIVER, VT.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS-PENDED TOTAL (UG/L AS AS)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA)	BARIUM, SUS-PENDED RECOV-ERABLE (UG/L AS BA)	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CADMIUM SUS-PENDED RECOV-ERABLE (UG/L AS CD)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	CHRO-MIUM, SUS-PENDED RECOV. (UG/L AS CR)
OCT 31...	1	0	1	--	--	0	0	0	3	20	10
JAN 09...	0	0	0	200	200	10	0	0	0	20	10
FEB 11...	--	--	--	--	--	--	--	--	--	--	--
APR 30...	2	0	2	<50	--	20	0	0	5	20	10
MAY 20...	--	--	--	--	--	--	--	--	--	--	--
JUN 24...	--	--	--	--	--	--	--	--	--	--	--
JUL 16...	1	0	1	100	80	20	0	0	0	20	10
AUG 27...	--	--	--	--	--	--	--	--	--	--	--
SEP 23...	--	--	--	--	--	--	--	--	--	--	--

DATE	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV-ERABLE (UG/L AS CO)	COBALT, SUS-PENDED RECOV-ERABLE (UG/L AS CO)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	COPPER, SUS-PENDED RECOV-ERABLE (UG/L AS CU)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)
OCT 31...	10	0	0	2	2	0	2	290	160	130	0
JAN 09...	<10	0	0	0	2	1	1	200	110	90	3
FEB 11...	--	--	--	--	--	--	--	--	--	--	--
APR 30...	10	0	0	0	2	0	2	360	300	60	0
MAY 20...	--	--	--	--	--	--	--	--	--	--	--
JUN 24...	--	--	--	--	--	--	--	--	--	--	--
JUL 16...	10	0	0	0	2	0	2	260	210	50	0
AUG 27...	--	--	--	--	--	--	--	--	--	--	--
SEP 23...	--	--	--	--	--	--	--	--	--	--	--

DATE	LEAD, SUS-PENDED RECOV-ERABLE (UG/L AS PB)	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	MERCURY SUS-PENDED RECOV-ERABLE (UG/L AS HG)	MERCURY DIS-SOLVED (UG/L AS HG)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	NICKEL, SUS-PENDED RECOV-ERABLE (UG/L AS NI)
OCT 31...	0	1	--	--	30	<.1	<.0	<.1	12	12
JAN 09...	2	1	30	20	10	<.1	<.0	<.1	4	4
FEB 11...	--	--	--	--	--	--	--	--	--	--
APR 30...	0	0	40	10	30	<.1	<.0	<.1	2	0
MAY 20...	--	--	--	--	--	--	--	--	--	--
JUN 24...	--	--	--	--	--	--	--	--	--	--
JUL 16...	0	0	100	80	20	<.1	--	<.1	10	10
AUG 27...	--	--	--	--	--	--	--	--	--	--
SEP 23...	--	--	--	--	--	--	--	--	--	--

01138500 CONNECTICUT RIVER AT WELLS RIVER, VT.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, TOTAL (UG/L AS SE)	SELE-NIUM, SUS-PENDED TOTAL (UG/L AS SE)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG)	SILVER, SUS-PENDED RECOV-ERABLE (UG/L AS AG)	SILVER, DIS-SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	ZINC, SUS-PENDED RECOV-ERABLE (UG/L AS ZN)	ZINC, DIS-SOLVED (UG/L AS ZN)
OCT										
31...	0	0	0	0	--	--	0	10	0	20
JAN										
09...	0	0	0	0	0	0	0	200	110	90
FEB										
11...	--	--	--	--	0	--	--	--	--	--
APR										
30...	2	0	0	0	0	0	0	10	9	1
MAY										
20...	--	--	--	--	0	--	--	--	--	--
JUN										
24...	--	--	--	--	0	--	--	--	--	--
JUL										
16...	0	0	0	0	0	0	0	930	930	0
AUG										
27...	--	--	--	--	0	--	--	--	--	--
SEP										
23...	--	--	--	--	0	--	--	--	--	--

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

PERIPHYTON

Dates of exposure	Length of exposure (days)	Biomass (g/m^2)		Chlorophyll a (mg/m^2)	Chlorophyll b (mg/m^2)	Sampling method
		Dry weight	Ash weight			
September 25 to October 31	37	4.57	4.02	6.90	2.14	Polyethylene strip
July 16 to August 27	42	2.84	2.05	4.93	1.11	Polyethylene strip

01138500 CONNECTICUT RIVER AT WELLS RIVER, VT--Continued

QUALITATIVE AND QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

PHYTOPLANKTON

DATE	NOV 27,79	MAR 24,80	MAY 20,80	JUN 24,80
TIME	1145	1215	1145	1215
TOTAL CELLS/ML	2000	1400	140	640
DIVERSITY: DIVISION	0.7	0.5	1.7	1.5
.CLASS	0.7	0.5	1.7	1.5
..ORDER	0.8	0.5	2.1	1.7
...FAMILY	2.9	0.6	2.4	2.5
....GENUS	3.0	0.6	2.4	2.6

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)								
.CHLOROPHYCEAE								
..CHLOROCOCCALES								
...COELASTRACEAE								
....COELASTRUM	--	-	--	-	--	-	--	-
...HYDRODICTYACEAE								
....PEDIASTRUM	--	-	--	-	--	-	--	-
...MICRACTINIACEAE								
....GOLENKINIA	--	-	--	-	26‡	18	--	-
...OOCYSTACEAE								
....ANKISTRODESMUS	--	-	--	-	--	-	90	14
....CHODATELLA	--	-	--	-	13	9	--	-
....KIRCHNERIELLA	--	-	--	-	--	-	--	-
....SELENASTRUM	--	-	--	-	--	-	13	2
....TETRAEDRON	--	-	--	-	--	-	--	-
...SCENEDESMACEAE								
....SCENEDESMUS	350‡	17	26	2	--	-	150‡	24
..VOLVOCALES								
...CHLAMYDOMONADACEAE								
....CHLAMYDOMONAS	--	-	--	-	26‡	18	13	2
..ZYGNEMATALES								
...DESMIDIACEAE								
....COSMARIUM	--	-	--	-	--	-	--	-
CHRYSOPHYTA								
.BACILLARIOPHYCEAE								
..CENTRALES								
...COSCINODISCACEAE								
....CYCLOTELLA	15	1	--	-	--	-	13	2
....MELOSIRA	--	-	--	-	--	-	--	-
..PENNALES								
...ACHNANTHACEAE								
....ACHNANTHES	340‡	17	--	-	--	-	--	-
...CYMBELLACEAE								
....CYMBELLA	150	7	--	-	--	-	13	2
...FRAGILARIACEAE								
....ASTERIONELLA	--	-	--	-	--	-	--	-
....FRAGILARIA	--	-	13	1	--	-	26	4
....HANNAEA	100	5	--	-	--	-	--	-
....SYNEDRA	320‡	16	26	2	--	-	--	-
...GOMPHONEMATACEAE								
....GOMPHONEMA	220	11	--	-	--	-	--	-
...NAVICULACEAE								
....NAVICULA	350‡	17	13	1	--	-	--	-
...NITZSCHIACEAE								
....NITZSCHIA	44	2	39	3	13	9	13	2
...TABELLARIACEAE								
....TABELLARIA	120	6	--	-	--	-	180‡	28
CYANOPHYTA (BLUE-GREEN ALGAE)								
.CYANOPHYCEAE								
..CHROOCOCCALES								
...CHROOCOCCACEAE								
....ANACYSTIS	--	-	--	-	52‡	36	130‡	20
..HORMOGONALES								
...NOSTOCACEAE								
....ANABAENA	--	-	--	-	--	-	--	-
...OSCILLATORIACEAE								
....OSCILLATORIA	--	-	1300‡	92	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)								
.EUGLENOPHYCEAE								
..EUGLENALES								
...EUGLENACEAE								
....EUGLENA	15	1	--	-	--	-	--	-
PYRRHOPHYTA (FIRE ALGAE)								
.DINOPHYCEAE								
..PERIDINIALES								
...GLENODINIACEAE								
....GLENODINIUM	--	-	--	-	13	9	--	-

NOTE: ‡ - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15 PERCENT
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2 PERCENT

01138500 CONNECTICUT RIVER AT WELLS RIVER, VT--Continued

QUALITATIVE AND QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980--Continued

PHYTOPLANKTON

DATE	JUL 16,80	AUG 27,80	SEP 23,80
TIME	1120	1215	1215
TOTAL CELLS/ML	2000	590	77
DIVERSITY: DIVISION	1.0	1.5	0.9
.CLASS	1.0	1.5	0.9
..ORDER	1.7	1.8	0.9
...FAMILY	2.9	2.1	1.9
....GENUS	3.3	2.1	1.9

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)						
.CHLOROPHYCEAE						
..CHLOROCOCCALES						
...COELASTRACEAE						
....COELASTRUM	--	-	130‡	22	--	-
...HYDRODICTYACEAE						
....PEDIASTRUM	340‡	17	--	-	--	-
...MICRACTINIACEAE						
....GOLENKINIA	--	-	--	-	--	-
...OOCYSTACEAE						
....ANKISTRODESMUS	110	6	--	-	26‡	33
....CHODATELLA	--	-	--	-	--	-
....KIRCHNERIELLA	14	1	--	-	--	-
....SELENASTRUM	--	-	--	-	--	-
....TETRAEDRON	14	1	--	-	--	-
...SCENEDESMACEAE						
....SCENEDESMUS	470‡	24	26	4	26‡	33
..VOLVOCALES						
...CHLAMYDOMONADACEAE						
....CHLAMYDOMONAS	86	4	--	-	--	-
..ZYGNEMATALES						
...DESMIDIACEAE						
....COSMARIUM	14	1	--	-	--	-
CHRYSOPHYTA						
.BACILLARIOPHYCEAE						
..CENTRALES						
...COSCINODISCACEAE						
....CYCLOTELLA	300‡	15	13	2	--	-
....MELOSIRA	110	6	--	-	--	-
..PENNALES						
...ACHNANTHACEAE						
....ACHNANTHES	43	2	--	-	--	-
...CYMBELLACEAE						
....CYMBELLA	14	1	--	-	--	-
...FRAGILARIACEAE						
....ASTERIONELLA	57	3	--	-	--	-
....FRAGILARIA	14	1	13	2	--	-
....HANNAEA	--	-	--	-	--	-
....SYNEDRA	110	6	--	-	--	-
...GOMPHONEMATACEAE						
....GOMPHONEMA	43	2	--	-	13‡	17
...NAVICULACEAE						
....NAVICULA	--	-	--	-	--	-
...NITZSCHIACEAE						
....NITZSCHIA	220	11	100‡	17	13‡	17
...TABELLARIACEAE						
....TABELLARIA	--	-	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)						
.CYANOPHYCEAE						
..CHROOCOCCALES						
...CHROOCOCCACEAE						
....ANACYSTIS	--	-	26	4	--	-
..HORMOGONALES						
...NOSTOCACEAE						
....ANABAENA	--	-	280‡	48	--	-
...OSCILLATORIACEAE						
....OSCILLATORIA	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)						
.EUGLENOPHYCEAE						
..EUGLENALES						
...EUGLENACEAE						
....EUGLENA	--	-	--	-	--	-
PYRRHOPHYTA (FIRE ALGAE)						
.DINOPHYCEAE						
..PERIDINIALES						
...GLENODINIACEAE						
....GLENODINIUM	--	-	--	-	--	-

NOTE: ‡ - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15 PERCENT
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2 PERCENT

01138500 CONNECTICUT RIVER AT WELLS RIVER, VT--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	102	79	86	85	68	72	107	69	86
2	---	---	---	101	82	92	87	35	75	90	35	74
3	---	---	---	83	35	68	94	72	80	90	37	79
4	---	---	---	105	66	80	82	35	66	86	35	74
5	---	---	---	107	35	77	84	35	71	76	35	64
6	---	---	---	78	68	71	83	35	71	80	35	68
7	---	---	---	84	34	70	81	35	66	95	35	83
8	---	---	---	85	35	70	88	73	81	81	35	70
9	---	---	---	85	34	61	87	78	81	85	35	68
10	---	---	---	85	35	73	110	88	96	90	79	84
11	---	---	---	86	34	72	106	37	90	87	78	83
12	---	---	---	103	34	78	88	37	80	91	78	84
13	---	---	---	93	37	81	97	37	84	90	71	81
14	---	---	---	86	35	73	98	77	85	141	79	108
15	---	---	---	88	35	79	91	35	74	102	69	81
16	---	---	---	87	37	73	79	35	61	107	86	94
17	---	---	---	85	79	81	103	73	81	108	76	87
18	---	---	---	86	81	84	99	73	81	79	35	71
19	---	---	---	97	80	87	85	35	71	75	68	71
20	---	---	---	106	81	96	76	66	69	88	76	82
21	---	---	---	90	79	84	76	69	71	91	70	78
22	---	---	---	84	79	81	83	69	77	77	67	71
23	99	87	94	82	37	68	93	79	87	75	67	70
24	93	81	86	93	35	55	91	35	81	80	70	76
25	80	35	75	105	88	96	97	35	63	91	73	81
26	91	78	87	102	89	95	128	97	111	92	80	89
27	100	35	83	90	34	68	98	35	76	89	76	85
28	82	35	69	88	37	81	79	35	68	118	73	85
29	96	35	81	76	35	70	73	66	69	119	37	79
30	103	81	95	84	35	70	81	35	62	84	35	74
31	92	79	84	---	---	---	99	35	75	81	37	74
MONTH	103	35	84	107	34	77	128	35	77	141	35	79

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	81	35	71	83	35	69	84	79	81			
2	78	35	66	93	81	86	82	80	81			
3	83	35	73	86	70	79	91	81	86			
4	88	35	71	111	35	88	92	82	86			
5	99	69	85	86	37	74	88	81	83			
6	78	35	70	82	35	70	90	86	89			
7	77	66	71	97	81	87	101	85	93			
8	76	37	66	97	82	89	103	89	97			
9	87	35	77	122	86	99	97	86	90			
10	90	37	80	124	85	95	88	76	82			
11	88	69	78	143	35	102	92	84	89			
12	110	72	89	89	35	69	84	75	79			
13	75	69	72	89	79	83	80	74	77			
14	75	69	71	92	78	83	78	35	74			
15	79	71	74	109	85	98	75	71	73			
16	87	74	82	114	94	102	74	70	72			
17	94	85	89	111	81	96	71	68	70			
18	93	82	88	121	81	98	72	68	69			
19	87	75	80	105	88	94	74	68	72			
20	119	79	98	132	96	110	82	74	78			
21	78	35	66	134	89	110	89	77	83			
22	80	35	65	101	86	92	97	74	85			
23	86	35	78	109	82	91	83	37	74			
24	101	79	93	104	84	92	79	35	71			
25	88	71	79	93	79	85	75	35	68			
26	116	75	93	94	80	87	75	67	70			
27	114	72	95	91	76	81	80	67	72			
28	81	35	71	94	77	82	67	64	65			
29	79	35	68	95	80	85	67	64	65			
30	---	---	---	94	77	85	64	63	64			
31	---	---	---	95	83	92	---	---	---			
MONTH	119	35	78	143	35	89	103	35	78			
YEAR	143	34	80									

01138500 CONNECTICUT RIVER AT WELLS RIVER, VT--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	10.0	7.0	8.5	5.5	4.5	5.0	2.0	.5	1.5
2	---	---	---	10.0	8.0	9.0	4.5	4.0	4.0	2.5	1.5	2.0
3	---	---	---	10.5	9.5	10.0	4.0	1.0	3.5	2.0	1.0	1.5
4	---	---	---	9.0	7.5	8.5	5.0	4.0	4.5	1.5	1.0	1.0
5	---	---	---	9.5	6.5	8.0	5.0	4.0	4.5	1.5	1.0	1.0
6	---	---	---	9.5	8.5	9.0	5.0	4.0	4.5	1.5	.5	1.0
7	---	---	---	9.5	8.0	9.0	5.0	4.5	5.0	1.0	.5	.5
8	---	---	---	9.5	8.5	9.5	5.0	3.0	4.0	2.0	1.0	1.5
9	---	---	---	9.0	8.0	9.0	3.5	2.0	2.5	1.5	1.0	1.0
10	---	---	---	9.5	8.5	9.0	2.0	1.5	2.0	1.0	.5	1.0
11	---	---	---	9.0	8.5	9.0	4.5	1.5	2.5	1.5	1.0	1.0
12	---	---	---	9.0	8.0	8.5	5.0	1.5	4.0	2.0	1.0	1.5
13	---	---	---	9.0	7.0	8.0	4.5	1.5	3.0	1.0	.5	1.0
14	---	---	---	8.5	8.0	8.5	3.5	2.0	3.0	1.0	.5	.5
15	---	---	---	8.5	6.5	7.5	2.5	2.0	2.0	2.0	.5	1.5
16	---	---	---	8.0	6.0	6.5	2.5	2.0	2.5	2.0	1.0	1.5
17	---	---	---	6.0	3.5	5.0	2.5	1.0	2.0	2.0	1.0	1.5
18	---	---	---	6.0	4.0	5.0	2.0	1.5	2.0	2.5	1.5	2.0
19	---	---	---	6.0	4.0	5.0	2.5	1.5	1.5	2.0	2.0	2.0
20	---	---	---	7.0	4.5	5.5	2.5	1.5	2.0	2.0	1.5	1.5
21	---	---	---	6.5	6.0	6.5	2.5	1.5	1.5	1.5	1.0	1.0
22	---	---	---	6.5	6.5	6.5	2.0	1.5	1.5	1.5	1.0	1.0
23	---	---	---	7.5	5.5	6.5	2.0	1.5	1.5	2.0	1.0	1.5
24	14.5	13.5	14.5	8.0	5.5	7.5	3.0	1.5	2.0	1.5	.5	1.0
25	13.5	12.0	12.5	8.0	5.5	7.5	3.0	2.0	2.5	1.0	.5	.5
26	12.0	1.5	10.5	8.5	6.5	8.0	2.0	1.0	1.5	1.0	.5	.5
27	10.0	7.5	9.0	9.0	7.0	8.0	2.5	1.0	2.0	1.0	.5	.5
28	9.5	6.5	8.5	7.0	6.5	7.0	2.5	1.5	2.0	1.0	.5	.5
29	9.5	6.5	8.5	6.5	5.5	6.0	3.0	2.0	2.5	1.0	.5	.5
30	9.5	7.0	8.0	5.5	4.5	5.5	2.5	2.0	2.0	.5	.5	.5
31	10.0	8.5	9.5	---	---	---	2.0	1.0	1.5	.5	.5	.5
MONTH	14.5	1.5	10.0	10.5	3.5	7.5	5.5	1.0	2.5	2.5	.5	1.0

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	.5	.5	.5	1.0	.5	.5	3.0	2.0	2.0			
2	.5	.5	.5	1.0	.0	.5	2.5	2.0	2.5			
3	.5	.0	.5	1.0	.0	.5	3.5	1.5	2.5			
4	.5	.0	.5	1.0	.0	.5	2.5	2.0	2.5			
5	.5	.0	.5	.5	.5	.5	2.5	2.0	2.5			
6	.5	.0	.5	1.0	.0	.5	3.5	1.5	2.5			
7	.5	.0	.5	1.0	.5	1.0	5.0	2.5	3.5			
8	1.0	.0	.5	1.0	.5	1.0	4.5	3.5	4.0			
9	1.0	.0	.5	1.5	.0	1.0	4.0	3.5	3.5			
10	1.0	.0	.5	1.5	1.0	1.5	3.5	3.0	3.0			
11	1.0	.0	.5	1.5	.5	1.0	3.0	2.5	3.0			
12	1.0	.0	.5	1.5	.5	1.0	3.0	2.5	3.0			
13	1.0	.0	.5	1.0	.5	1.0	4.0	2.5	3.5			
14	1.0	.0	.5	1.0	1.0	1.0	3.5	3.0	3.5			
15	1.0	.0	.5	1.5	1.0	1.0	4.0	3.0	3.5			
16	1.0	.5	.5	1.5	.0	1.0	3.5	3.0	3.5			
17	.5	.0	.5	1.5	1.0	1.5	4.0	2.5	3.0			
18	.5	.0	.5	2.0	1.5	1.5	3.5	3.0	3.0			
19	.5	.0	.5	2.0	1.0	1.5	5.0	3.0	4.0			
20	1.0	.0	.5	2.5	1.0	1.5	6.0	5.0	5.5			
21	1.0	.5	.5	2.0	1.5	1.5	7.5	6.0	7.0			
22	.5	.5	.5	3.0	1.0	2.0	7.0	5.5	6.5			
23	1.0	.5	.5	2.5	1.5	2.0	5.5	4.5	5.0			
24	1.0	.5	.5	2.5	1.5	2.0	6.0	4.5	5.5			
25	1.0	.0	1.0	2.5	1.5	2.0	6.5	5.5	5.5			
26	1.0	.5	1.0	2.5	1.5	2.0	6.5	5.5	6.0			
27	.5	.5	.5	3.0	1.5	2.0	6.5	5.0	5.5			
28	1.0	.5	.5	3.5	2.0	2.5	6.0	5.0	5.5			
29	.5	.5	.5	2.5	1.5	2.0	5.5	5.0	5.5			
30	---	---	---	2.0	1.5	1.5	6.0	5.5	5.5			
31	---	---	---	2.0	1.0	1.5	---	---	---			
MONTH	1.0	.0	.5	3.5	.0	1.5	7.5	1.5	4.0			

01138500 CONNECTICUT RIVER AT WELLS RIVER, VT--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	21.5	21.0	21.0	21.5	21.0	21.0			
2	---	---	---	21.0	21.0	21.0	21.0	21.0	21.0			
3	---	---	---	21.5	21.0	21.0	21.0	21.0	21.0			
4	---	---	---	21.5	21.0	21.0	21.5	21.0	21.0			
5	---	---	---	21.0	21.0	21.0	21.5	21.0	21.0			
6	---	---	---	21.0	21.0	21.0	21.0	21.0	21.0			
7	---	---	---	21.5	21.0	21.0	21.0	21.0	21.0			
8	---	---	---	21.5	21.0	21.5	21.0	21.0	21.0			
9	---	---	---	21.5	21.0	21.0	---	---	---			
10	---	---	---	21.5	21.0	21.0	---	---	---			
11	---	---	---	21.0	21.0	21.0	---	---	---			
12	---	---	---	21.5	21.0	21.0	---	---	---			
13	---	---	---	21.5	21.0	21.5	---	---	---			
14	---	---	---	21.5	21.0	21.0	---	---	---			
15	---	---	---	21.0	21.0	21.0	---	---	---			
16	---	---	---	21.0	21.0	21.0	---	---	---			
17	---	---	---	21.0	21.0	21.0	---	---	---			
18	---	---	---	21.0	21.0	21.0	---	---	---			
19	---	---	---	21.0	21.0	21.0	---	---	---			
20	---	---	---	21.0	21.0	21.0	---	---	---			
21	---	---	---	21.0	21.0	21.0	---	---	---			
22	---	---	---	21.0	21.0	21.0	---	---	---			
23	---	---	---	21.0	21.0	21.0	---	---	---			
24	22.5	17.5	19.5	21.5	21.0	21.0	---	---	---			
25	21.5	21.0	21.5	21.5	21.0	21.0	---	---	---			
26	21.5	21.0	21.0	21.0	21.0	21.0	---	---	---			
27	21.0	21.0	21.0	21.0	21.0	21.0	---	---	---			
28	21.5	21.0	21.0	21.0	21.0	21.0	---	---	---			
29	21.5	21.0	21.5	21.0	21.0	21.0	---	---	---			
30	21.5	21.0	21.0	21.5	21.0	21.0	---	---	---			
31	---	---	---	21.5	21.0	21.0	---	---	---			
MONTH	22.5	17.5	21.0	21.5	21.0	21.0	21.5	21.0	21.0			
YEAR	22.5	.0	6.5									

01139000 WELLS RIVER AT WELLS RIVER, VT

LOCATION.--Lat 44°09'03", long 72°03'55", Orange County, Hydrologic Unit 01080103, on right bank, 0.8 mi (1.3 km) west of village of Wells River, and 1.5 mi (2.4 km) upstream from mouth.

DRAINAGE AREA.--98.4 mi^2 (254.9 km^2).

PERIOD OF RECORD.--Discharge: August 1940 to current year.
Water-quality records: Water years 1957-58.

REVISED RECORDS.--WSP 1171: Drainage area. WSP 1201: 1942(P), 1944-45(M), 1946-47(P), 1948(M), 1950.

GAGE.--Water-stage recorder. Datum of gage is 505.53 ft (154.086 m) National Geodetic Vertical Datum of 1929 (levels by Connecticut River Power Co.).

REMARKS.--Records good except those for winter period, which are poor. Some diurnal fluctuation at low flow prior to 1958 caused by small powerplant upstream. Flow partly regulated by Groton and Ricker Ponds. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--40 years, 140 ft^3/s (3.965 m^3/s), 19.32 in/yr (491 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,970 ft^3/s (169 m^3/s) June 30, 1973, gage height, 9.82 ft (2.993 m), from rating curve extended above 1,400 ft^3/s (40 m^3/s) on basis of computation of peak flow over dam; minimum, 5.1 ft^3/s (0.14 m^3/s) Oct. 6, 1948; minimum daily, 8.3 ft^3/s (0.24 m^3/s) Sept. 5, 1953.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 980 ft^3/s (28 m^3/s) and maximums (*):

Date	Time	Discharge		Gage height		Date	Time	Discharge		Gage height	
		(ft^3/s)	(m^3/s)	(ft)	(m)			(ft^3/s)	(m^3/s)	(ft)	(m)
Apr. 10	1300	*1270	36.0	4.90	1.494						

Minimum discharge, 12 ft^3/s (0.34 m^3/s) Aug. 25-28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	55	124	58	28	18	284	210	67	63	26	38
2	35	58	110	56	27	17	274	195	78	43	24	46
3	36	158	90	54	26	17	238	175	96	43	24	70
4	62	178	93	50	25	17	248	165	168	35	29	54
5	51	120	90	56	24	18	271	140	153	30	25	39
6	49	96	87	62	23	18	206	125	110	34	22	33
7	46	84	93	54	23	19	198	336	87	31	22	27
8	42	76	92	50	22	19	225	290	84	29	20	22
9	46	69	68	47	22	20	245	254	103	41	19	19
10	47	80	80	43	21	20	910	235	81	33	16	19
11	46	88	78	60	21	20	720	195	76	28	15	18
12	50	74	83	300	21	20	476	178	69	28	16	16
13	124	68	112	150	21	19	444	160	64	28	19	15
14	93	64	80	110	22	19	366	163	60	26	18	32
15	74	63	55	86	23	18	349	144	55	24	21	55
16	70	60	56	74	22	18	345	134	57	25	20	35
17	63	56	62	66	22	17	265	120	56	26	17	28
18	57	70	50	56	21	290	216	120	51	32	15	36
19	54	76	41	48	22	380	189	242	44	27	14	39
20	50	72	50	40	22	275	175	201	41	25	22	32
21	50	70	62	30	22	290	216	158	80	25	19	29
22	47	69	68	33	21	345	198	134	77	39	17	35
23	44	77	72	35	21	385	178	116	62	54	15	82
24	74	72	82	37	21	360	173	103	53	44	14	84
25	122	68	150	38	20	285	173	95	46	33	13	59
26	86	120	250	37	20	215	228	93	40	27	12	124
27	70	516	120	35	20	215	251	62	36	26	12	112
28	62	281	105	33	19	270	220	58	33	26	15	84
29	63	198	96	32	19	320	225	57	30	23	19	66
30	68	151	82	30	---	462	225	58	30	25	16	53
31	61	---	76	29	---	352	---	57	---	30	24	---
TOTAL	1875	3287	2757	1889	641	4758	8731	4763	2087	1003	580	1401
MEAN	60.5	110	88.9	60.9	22.1	153	291	154	69.6	32.4	18.7	46.7
MAX	124	516	250	300	28	462	910	336	168	63	29	124
MIN	33	55	41	29	19	17	173	57	30	23	12	15
CFSM	.62	1.12	.90	.62	.23	1.56	2.96	1.57	.71	.33	.19	.48
IN.	.71	1.24	1.04	.71	.24	1.80	3.30	1.80	.79	.38	.22	.53

CAL YR 1979 TOTAL 51374 MEAN 141 MAX 1430 MIN 22 CFSM 1.43 IN 19.42
WTR YR 1980 TOTAL 33772 MEAN 92.3 MAX 910 MIN 12 CFSM .94 IN 12.77

01139800 EAST ORANGE BRANCH AT EAST ORANGE, VT

LOCATION.--Lat 44°05'34", long 72°20'10", Orange County, Hydrologic Unit 01080103, on left bank 0.3 mi (0.5 km) east of East Orange, 1.6 mi (2.6 km) upstream from mouth, and 5 mi (8 km) southwest of Orange.

DRAINAGE AREA.--8.95 mi^2 (23.18 km^2).

PERIOD OF RECORD.--June 1958 to current year.

REVISED RECORDS.--WDR MA-NH-RI-VT-72-1: 1960-64(P), 1969-71(P).

GAGE.--Water-stage recorder. Altitude of gage is 1,180 ft (360 m), from topographic map.

REMARKS.--Records good except those for October through the winter period, which are poor. Occasional diurnal fluctuation at low flow caused by mill upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--22 years, 15.5 ft^3/s (0.439 m^3/s), 23.52 in/yr (597 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 672 ft^3/s (19.0 m^3/s) June 30, 1973, gage height, 5.55 ft (1.692 m), from rating curve extended above 130 ft^3/s (3.7 m^3/s) on basis of slope-area measurement of peak flow; maximum gage height, 6.35 ft (1.935 m) Jan. 22, 1959, ice jam; minimum discharge, 0.1 ft^3/s (0.003 m^3/s) Sept. 9, 19, 1963.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 140 ft^3/s (4.0 m^3/s) and maximums (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar. 18	0600	ice jam		*4.51	1.375	Apr. 10	0330	a*232	6.57	3.84	1.170

a From rating curve extended above 44 ft^3/s (1.2 m^3/s) on basis of slope-area measurement at gage height 5.55 ft (1.692 m).

Minimum discharge, 0.91 ft^3/s (0.026 m^3/s) Aug. 26, 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.9	6.5	13	8.6	4.5	3.0	33	25	12	3.5	2.3	6.7
2	3.6	8.2	13	8.0	4.4	3.0	22	23	13	4.5	5.7	6.5
3	8.7	14	12	7.2	4.2	2.8	25	22	18	4.5	4.8	7.9
4	11	12	12	6.4	4.1	2.8	22	21	31	3.1	3.4	2.6
5	5.6	11	11	6.4	3.9	2.9	22	20	18	3.0	2.3	2.2
6	12	9.5	11	6.0	3.8	3.0	20	28	12	3.2	2.9	2.1
7	8.3	9.0	11	5.2	3.7	3.1	28	47	11	2.5	2.4	1.8
8	4.9	8.6	11	5.6	3.6	3.3	23	29	12	4.8	1.8	1.5
9	5.6	8.4	10	5.4	3.5	3.5	48	33	11	4.2	1.6	1.4
10	8.3	12	9.0	5.2	3.4	3.6	95	26	9.5	2.9	1.4	1.6
11	7.3	10	9.2	10	3.4	3.5	53	25	8.9	2.5	1.5	1.4
12	12	9.4	9.1	34	3.3	3.4	40	23	8.6	2.5	2.5	1.2
13	13	8.6	9.8	15	3.2	3.3	49	28	7.6	3.1	2.5	1.2
14	9.8	8.2	8.8	10	3.2	3.2	38	24	6.7	2.4	1.8	11
15	8.7	7.6	7.6	13	3.2	3.1	48	21	6.3	2.1	2.1	8.6
16	9.1	7.2	8.6	10	3.3	3.1	38	20	8.9	2.5	1.6	3.2
17	6.4	7.0	8.2	9.4	3.2	3.7	31	19	6.7	2.3	1.6	2.4
18	6.4	7.2	7.6	8.2	3.2	45	28	28	5.9	2.6	1.4	5.7
19	4.3	6.8	6.4	7.4	3.2	30	28	33	5.3	1.9	1.4	3.0
20	4.3	6.6	6.2	7.2	3.3	14	28	22	6.7	1.9	1.6	2.4
21	4.0	6.6	6.3	7.6	3.4	17	31	19	15	4.3	1.4	2.2
22	3.8	7.0	6.4	8.0	3.4	20	25	17	8.9	6.5	1.2	3.1
23	4.0	7.4	6.6	7.2	3.3	23	24	16	6.3	8.6	1.2	2.4
24	12	7.0	7.8	6.6	3.2	20	25	15	5.1	5.1	1.1	2.1
25	10	10	32	6.2	3.3	16	24	14	4.5	2.8	1.0	1.8
26	9.1	47	20	6.0	3.2	11	34	13	4.0	2.3	1.0	16
27	8.0	27	15	5.8	3.3	23	26	13	3.7	2.2	1.0	6.3
28	7.2	20	12	5.4	3.2	35	25	12	3.5	1.9	2.6	3.4
29	7.4	17	11	5.2	3.1	36	31	11	3.4	1.9	1.6	2.6
30	7.0	14	9.8	5.0	---	47	28	11	3.5	4.5	1.5	2.5
31	6.5	---	9.2	4.7	---	29	---	10	---	4.5	8.4	---
TOTAL	231.2	340.8	330.6	255.9	101.0	420.3	992	668	277.0	104.6	68.6	116.8
MEAN	7.46	11.4	10.7	8.25	3.48	13.6	33.1	21.5	9.23	3.37	2.21	3.89
MAX	13	47	32	34	4.5	47	95	47	31	8.6	8.4	16
MIN	2.9	6.5	6.2	4.7	3.1	2.8	20	10	3.4	1.9	1.0	1.2
CFSM	.83	1.27	1.20	.92	.39	1.52	3.70	2.40	1.03	.38	.25	.44
IN.	.96	1.42	1.37	1.06	.42	1.75	4.12	2.78	1.15	.43	.29	.49

CAL YR 1979 TOTAL 5902.8 MEAN 16.2 MAX 130 MIN 1.3 CFSM 1.81 IN 24.53
WTR YR 1980 TOTAL 3906.8 MEAN 10.7 MAX 95 MIN 1.0 CFSM 1.20 IN 16.24

01141500 OMPOMPANOOSUC RIVER AT UNION VILLAGE, VT

LOCATION.--Lat 43°47'23", long 72°15'19", Orange County, Hydrologic Unit 01080103, on right bank 100 ft (30 m) upstream from covered bridge at Union Village, 0.2 mi (0.3 km) downstream from Avery Brook, 0.3 mi (0.5 km) downstream from Union Village Reservoir, and 3.8 mi (6.1 km) upstream from mouth.

DRAINAGE AREA.--130 mi^2 (337 km^2).

PERIOD OF RECORD.--Discharge: September 1940 to current year.
Water-quality records: Water years 1955, 1957-58.

GAGE.--Water-stage recorder. Altitude of gage is 435 ft (133 m), from topographic map.

REMARKS.--Records good except those for period of no gage-height record, May 4 to June 24, which are fair, and backwater from rocks and boulders June 24 to Sept. 30, and those for winter period, which are poor. Flow regulated by Union Village Reservoir (Reservoirs in Connecticut River basin) since October 1949. Some regulation by Lake Fairlee. Several observations of water temperatures and specific conductance were made during the year.

AVERAGE DISCHARGE.--40 years, 193 ft^3/s (5.466 m^3/s), 20.16 in/yr (512 mm/yr), adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,800 ft^3/s (136 m^3/s) June 3, 1947, gage height, 9.65 ft (2.941 m), from rating curve extended above 2,400 ft^3/s (68 m^3/s) on basis of slope-area measurement of peak flow; minimum, 1.7 ft^3/s (0.048 m^3/s) Oct. 14, 1949; minimum daily, 2.0 ft^3/s (0.057 m^3/s) Oct. 20, 1949. Maximum discharge since construction of Union Village Reservoir in 1949, 2,350 ft^3/s (66.6 m^3/s) Apr. 20, 1950, gage height, 7.62 ft (2.323 m); maximum gage height, 7.68 ft (2.341 m) Apr. 7, 1976.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1869, about 14.5 ft (4.42 m) in November 1927, from information by local resident (discharge not determined).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,400 ft^3/s (39.6 m^3/s) Apr. 11, gage height, 6.80 ft (2.073 m); minimum, 8.0 ft^3/s (0.23 m^3/s) Aug. 25-28; minimum daily, 8.8 ft^3/s (0.25 m^3/s) Aug. 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40	83	208	105	52	26	342	295	70	30	22	18
2	47	81	179	90	47	26	317	276	70	28	18	19
3	52	247	155	98	44	24	270	240	70	30	18	40
4	165	214	150	82	41	24	272	220	80	26	22	26
5	88	166	142	70	38	24	327	220	135	24	19	19
6	119	146	135	66	34	25	280	220	125	28	15	18
7	90	133	145	64	31	26	239	500	95	25	14	15
8	71	126	147	66	31	25	238	360	80	26	13	14
9	68	117	126	74	35	26	262	290	85	44	12	12
10	84	147	114	68	40	31	432	265	90	29	11	11
11	79	139	116	66	36	38	1000	235	75	24	11	11
12	90	124	118	200	31	31	1290	220	70	51	12	10
13	200	115	122	150	27	27	1050	220	65	35	17	10
14	134	112	124	84	26	27	596	230	60	27	17	20
15	112	105	105	98	21	27	540	220	55	22	18	37
16	114	97	99	90	23	28	492	195	60	22	18	26
17	99	82	110	84	29	32	376	195	55	26	14	20
18	94	84	105	78	30	280	340	190	50	31	12	25
19	86	86	88	76	28	315	313	235	40	34	11	27
20	80	86	82	70	28	200	301	235	40	29	12	21
21	77	76	80	62	28	280	307	205	95	31	13	18
22	75	63	76	60	29	240	272	190	85	44	12	18
23	71	66	72	40	28	320	254	170	60	51	11	20
24	139	76	84	54	28	490	248	150	50	48	10	19
25	158	94	230	80	27	470	241	135	47	38	9.6	18
26	120	126	623	78	28	275	313	115	40	28	9.2	54
27	106	468	270	74	28	230	306	105	37	24	8.8	54
28	98	443	190	70	28	400	282	90	33	23	9.6	37
29	98	261	150	64	27	459	312	90	31	22	10	29
30	95	244	135	60	---	584	346	80	30	21	10	24
31	88	---	120	56	---	412	---	70	---	28	16	---
TOTAL	3037	4407	4600	2477	923	5422	12158	6461	1978	949	425.2	690
MEAN	98.0	147	148	79.9	31.8	175	405	208	65.9	30.6	13.7	23.0
MAX	200	468	623	200	52	584	1290	500	135	51	22	54
MIN	40	63	72	40	21	24	238	70	30	21	8.8	10
MEAN†	98	155	145	81.3	31.1	173	403	207	65.9	30.6	13.7	23.0
CFSM†	.75	1.19	1.12	.63	.24	1.33	3.10	1.59	.51	.24	.11	.18
IN†	.87	1.33	1.29	.72	.26	1.54	3.46	1.83	.57	.27	.12	.20

CAL YR 1979 TOTAL 70956.0 MEAN 194 MAX 1740 MIN 18 MEAN† 194 CFSM† 1.49 IN† 20.30
WTR YR 1980 TOTAL 43527.2 MEAN 119 MAX 1290 MIN 8.8 MEAN† 119 CFSM† .92 IN† 12.45

† Adjusted for change in contents in Union Village Reservoir.

01141800 MINK BROOK NEAR ETNA, NH

LOCATION.--Lat 43°42'08", long 72°11'15", Grafton County, Hydrologic Unit 01080104, on left bank 2 mi (3 km) northeast of Etna and 5 mi (8 km) east of Hanover.

DRAINAGE AREA.--4.60 mi^2 (11.91 km^2).

PERIOD OF RECORD.--August 1962 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,000 ft (300 m), from topographic map.

REMARKS.--Records poor. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--18 years, 7.44 ft^3/s (0.211 m^3/s), 21.96 in/yr (558 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 560 ft^3/s (15.9 m^3/s) Aug. 15, 1976, gage height, 3.80 ft (1.158 m), from rating curve extended above 130 ft^3/s (3.7 m^3/s) on basis of slope-area measurement at gage heights 3.50 ft (1.067 m) and 3.75 ft (1.143 m); maximum gage height, 4.28 ft (1.305 m) Jan. 9, 1978, backwater from ice; minimum discharge, 0.01 ft^3/s (<0.001 m^3/s) Aug. 11, 1964.

EXTREMES FOR CURRENT YEAR.--Peak discharges, above base of 55 ft^3/s (160 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar. 28	1430	ice jam		*2.49	0.759	Apr. 10	0830	*90	2.55	2.47	0.753

Minimum daily discharge, 0.04 ft^3/s (0.001 m^3/s) Aug. 25-29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.0	3.3	8.3	4.0	.90	.70	12	9.7	1.0	.90	.06	.40
2	10	3.6	7.4	3.5	.84	.67	11	8.3	.80	.52	.40	2.5
3	11	21	5.4	3.0	.78	.65	11	7.9	.88	.46	.30	4.1
4	20	11	3.9	2.5	.74	.64	12	6.7	.96	.30	.25	.73
5	15	8.3	3.4	2.0	.70	.65	14	6.3	1.1	.21	.15	.34
6	20	7.1	3.1	1.7	.66	.66	11	6.0	2.2	.21	.11	.25
7	13	6.3	4.2	2.7	.64	.76	10	12	2.2	.15	.15	.18
8	5.0	6.0	5.0	2.6	.64	.90	9.6	12	2.0	.90	.08	.11
9	3.5	5.3	9.0	2.5	.64	1.2	9.0	10	1.7	1.2	.08	.08
10	3.9	6.0	5.0	2.4	.62	1.5	65	8.3	1.4	.46	.06	.09
11	3.5	6.0	3.7	3.1	.62	1.7	35	7.1	1.2	.30	.06	.07
12	3.2	5.6	3.6	10	.60	1.8	23	7.1	.99	.18	.08	.07
13	18	5.3	5.4	6.0	.60	1.9	21	6.3	1.1	.18	.08	.06
14	6.0	5.3	5.2	4.0	.58	1.4	16	7.1	.90	.13	.10	.21
15	3.0	5.0	3.1	3.0	.57	1.3	23	6.0	.81	.11	.15	.30
16	2.5	5.0	3.6	2.3	.59	1.3	19	5.3	3.3	.73	.10	.21
17	2.2	2.3	5.8	2.2	.62	1.2	14	4.7	1.6	.40	.08	.13
18	4.1	4.4	4.2	2.1	.63	4.0	13	4.7	1.1	.21	.06	.66
19	3.6	2.1	3.1	2.1	.64	14	11	5.3	.73	.13	.06	.46
20	3.6	2.1	2.7	2.0	.68	12	11	5.0	.81	.11	.06	.55
21	3.6	2.0	2.5	1.9	.70	11	12	4.1	3.1	.13	.06	.46
22	3.3	19	2.2	1.7	.74	15	11	3.6	1.8	.18	.06	.40
23	3.1	18	1.9	1.6	.79	15	10	3.1	1.2	.21	.05	.35
24	3.6	17	3.5	1.5	.80	15	9.7	2.7	.81	.18	.05	.34
25	9.0	5.3	9.0	1.4	.81	15	9.2	2.3	.66	.11	.04	.80
26	25	16	25	1.3	.80	11	11	2.2	.46	.10	.04	.50
27	15	26	15	1.3	.78	11	11	1.8	.34	.08	.04	4.5
28	9.0	14	9.0	1.2	.74	12	10	1.7	.30	.07	.04	2.5
29	7.0	11	7.0	1.2	.71	15	9.7	1.6	.21	.07	.04	2.2
30	6.0	9.2	6.0	1.1	---	18	9.7	1.3	.40	.07	.05	1.9
31	4.8	---	4.8	1.0	---	16	---	1.2	---	.07	1.4	---
TOTAL	241.5	258.5	181.0	78.9	20.16	202.93	453.9	171.4	36.06	9.06	4.34	25.45
MEAN	7.79	8.62	5.84	2.55	.70	6.55	15.1	5.53	1.20	.29	.14	.85
MAX	25	26	25	10	.90	18	65	12	3.3	1.2	1.4	4.5
MIN	1.0	2.0	1.9	1.0	.57	.64	9.0	1.2	.21	.07	.04	.06
CFSM	1.69	1.87	1.27	.55	.15	1.42	3.28	1.20	.26	.06	.03	.19
IN.	1.95	2.09	1.46	.64	.16	1.64	3.67	1.39	.29	.07	.04	.21

CAL YR 1979 TOTAL 3167.61 MEAN 8.68 MAX 110 MIN .20 CFSM 1.89 IN 25.61
WTR YR 1980 TOTAL 1683.20 MEAN 4.60 MAX 65 MIN .04 CFSM 1.00 IN 13.61

01142500 AYERS BROOK AT RANDOLPH, VT

LOCATION.--Lat 43°56'04", long 72°39'30", Orange County, Hydrologic Unit 01080105, on right bank 135 ft (41 m) upstream from bridge on State Highway 12, just north of village limits of Randolph, 0.4 mi (0.6 km) upstream from Adams Brook, and 1.2 mi (1.9 km) upstream from mouth.

DRAINAGE AREA.--30.5 mi^2 (79.0 km^2).

PERIOD OF RECORD.--July 1939 to September 1975, June 1976 to current year.

REVISED RECORDS.--WDR MA-NH-RI-VT-72-1: 1949(M), 1952(M), 1953(P), 1958(P), 1960(M), 1967(M).

GAGE.--Water-stage recorder. Datum of gage is 630.50 ft (192.176 m) Vermont State Department of Highways datum. Prior to Oct. 1, 1964, at site 140 ft (43 m) downstream at datum 2.25 ft (0.686 m) higher and Oct. 1, 1964, to Sept. 30, 1975, at site 140 ft (43 m) downstream at datum 1.25 ft (0.381 m) higher.

REMARKS.--Records good except those for winter period and period of no gage-height record, Jan. 13 to Apr. 3, Aug. 19 to Sept. 21, which are poor. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--40 years (water years 1940-75, 1977-80), 46.1 ft^3/s (1.306 m^3/s), 20.53 in/yr (521 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,600 ft^3/s (73.6 m^3/s) June 30, 1973, gage height, 10.37 ft (3.161 m), present datum, from rating curve extended above 500 ft^3/s (14.2 m^3/s) on basis of contracted-opening measurement of peak flow; minimum, 0.6 ft^3/s (0.017 m^3/s) July 27, 1965.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1830, about 18 ft (5.5 m), present datum, in November 1927.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 350 ft^3/s (9.9 m^3/s) and maximums (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Nov. 27	0215	358	10.1	5.08	1.548	Apr. 10	0700	*452	12.8	5.53	1.686
Jan. 12	1000	ice jam		*6.08	1.853						

Minimum discharge not determined; minimum daily, 2.9 ft^3/s (0.08 m^3/s) Sept. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	23	54	31	20	11	95	67	23	11	7.0	6.7
2	11	24	46	35	19	11	76	66	24	9.9	6.4	6.0
3	13	56	41	25	18	11	64	60	41	10	5.6	7.4
4	28	45	41	20	16	10	67	55	75	9.9	6.4	5.4
5	18	36	39	22	15	10	82	52	48	8.5	5.8	4.3
6	39	34	37	24	14	11	66	54	36	8.7	12	4.4
7	25	31	39	24	14	12	61	124	32	9.0	9.6	4.0
8	19	31	37	25	13	14	65	97	32	8.2	6.4	3.6
9	18	29	29	24	13	19	79	81	31	8.5	5.2	3.4
10	19	44	30	40	13	25	272	69	29	8.7	4.3	3.4
11	20	36	30	80	12	24	200	63	27	9.0	3.7	3.2
12	31	33	30	140	12	21	131	62	27	18	4.7	3.1
13	56	31	34	90	11	17	156	58	25	12	6.8	2.9
14	42	31	29	62	11	14	124	62	24	8.7	5.8	6.0
15	33	29	25	80	11	13	143	52	22	7.5	6.2	7.2
16	31	29	29	70	11	13	127	48	21	9.6	5.4	5.6
17	30	27	25	50	11	15	106	45	21	9.9	4.7	4.8
18	27	26	23	45	11	170	93	47	18	8.5	4.0	7.8
19	25	26	19	42	11	140	87	66	18	7.0	3.9	7.0
20	24	26	19	37	11	86	84	50	18	6.8	5.0	5.6
21	24	25	20	31	11	100	83	43	24	8.5	4.7	4.9
22	23	24	20	27	11	130	74	39	22	11	4.4	9.0
23	22	26	35	29	11	120	69	36	18	14	4.0	6.4
24	28	26	60	27	11	115	67	34	15	16	3.8	5.4
25	29	26	80	24	11	95	64	31	14	11	3.6	4.9
26	25	46	72	24	11	78	63	28	13	8.2	3.5	23
27	23	159	56	25	11	88	62	26	12	7.7	3.7	18
28	25	86	50	26	10	110	61	25	11	6.4	5.2	11
29	25	76	43	24	11	140	64	24	11	5.6	4.8	7.7
30	24	64	37	23	---	160	77	23	11	7.0	4.1	6.2
31	23	---	28	21	---	120	---	22	---	9.9	6.0	---
TOTAL	791	1205	1157	1247	365	1903	2862	1609	743	294.7	166.7	198.3
MEAN	25.5	40.2	37.3	40.2	12.6	61.4	95.4	51.9	24.8	9.51	5.38	6.61
MAX	56	159	80	140	20	170	272	124	75	18	12	23
MIN	11	23	19	20	10	10	61	22	11	5.6	3.5	2.9
CFSM	.84	1.32	1.22	1.32	.41	2.01	3.13	1.70	.81	.31	.18	.22
IN.	.96	1.47	1.41	1.52	.45	2.32	3.49	1.96	.91	.36	.20	.24

CAL YR 1979 TOTAL 21320.7 MEAN 58.4 MAX 554 MIN 6.8 CFSM 1.92 IN 26.00
WTR YR 1980 TOTAL 12541.7 MEAN 34.3 MAX 272 MIN 2.9 CFSM 1.13 IN 15.30

01144000 WHITE RIVER AT WEST HARTFORD, VT

LOCATION.--Lat 43°42'51", long 72°25'07", Windsor County, Hydrologic Unit 01080105, on left bank 700 ft (200 m) upstream from highway bridge at West Hartford and 7.4 mi (11.9 km) upstream from mouth.

DRAINAGE AREA.--690 mi^2 (1,790 km^2).

PERIOD OF RECORD.--Discharge: June 1915 to current year. October 1927 to September 1928 monthly discharge only, published in WSP 1301.

Water-quality records: Water years 1953, 1967-74.

REVISED RECORDS.--WSP 756: Drainage area. WSP 781: 1928(M). WSP 1031: 1916(m), 1923. WSP 1301: 1916-26(M), 1929(M).

GAGE.--Water-stage recorder. Datum of gage is 374.53 ft (114.157 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 30, 1927, nonrecording gage at same site and datum.

REMARKS.--Records good except those for winter period, which are fair. Some diurnal fluctuation at low flow during period 1934-50 caused by powerplant upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--65 years, 1,181 ft^3/s (33.45 m^3/s), 23.24 in/yr (590 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 120,000 ft^3/s (3,400 m^3/s) Nov. 4, 1927, gage height, 29.3 ft (8.93 m), from floodmarks, from rating curve extended above 29,000 ft^3/s (820 m^3/s) on basis of slope area measurement of peak flow; minimum observed, about 35 ft^3/s (0.99 m^3/s) Aug. 4, 1918; minimum daily, 54 ft^3/s (1.53 m^3/s) Sept. 27, 28, 1963.

Stage and discharge of the flood of Nov. 4, 1927, are the greatest since at least 1761.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 11,600 ft^3/s (329 m^3/s) and maximums (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Apr. 10	0830	*12500	354	11.10	3.383						

Minimum discharge, 103 ft^3/s (2.92 m^3/s) Sept. 13, 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	323	560	1230	700	420	240	2080	1610	471	264	219	159
2	323	543	1120	840	385	225	2080	1670	532	314	223	176
3	369	1520	955	680	360	225	1760	1520	587	268	233	406
4	725	1580	970	480	340	220	2060	1370	1310	264	236	335
5	538	1160	903	490	310	220	2420	1220	1370	226	240	223
6	1090	985	889	505	290	225	1860	1170	1020	216	241	185
7	985	882	963	510	280	245	1700	3170	705	229	374	167
8	712	840	896	515	270	270	1900	2900	687	223	264	150
9	622	777	699	520	260	395	1850	2310	681	352	210	129
10	705	1000	744	490	270	520	8370	1960	616	331	182	120
11	645	1150	744	600	250	515	6670	1660	554	254	161	118
12	645	940	777	2920	240	424	3700	1670	527	272	159	113
13	1220	854	875	1480	230	310	4120	1470	501	261	164	104
14	1480	798	800	1220	235	298	3200	1570	457	216	194	122
15	1140	784	535	1770	240	279	3140	1390	410	194	200	227
16	1110	718	660	1390	230	261	3000	1250	433	203	223	239
17	978	687	780	1050	225	268	2280	1140	486	236	173	185
18	868	669	475	960	230	3500	1970	1080	392	213	164	187
19	840	657	400	900	240	2900	1760	1470	343	191	142	295
20	770	633	380	800	240	1750	1640	1280	339	173	142	223
21	712	628	460	600	260	2080	1830	1060	433	170	139	185
22	675	610	480	560	250	2770	1630	970	443	223	139	175
23	622	663	616	620	250	2530	1530	854	369	294	134	215
24	693	663	699	580	250	2420	1460	770	331	298	124	180
25	948	675	2490	480	250	2280	1400	712	310	279	114	165
26	757	983	2490	510	250	1670	1460	645	283	210	112	245
27	681	4110	1780	540	215	1590	1440	587	257	188	109	615
28	639	2320	1320	520	230	2100	1350	549	233	170	112	420
29	628	1740	1130	500	235	2660	1440	527	226	159	114	335
30	645	1430	1000	470	---	3420	1870	501	226	159	119	255
31	593	---	800	450	---	2430	---	481	---	207	127	---
TOTAL	23681	31559	29060	24650	7735	39240	72970	40536	15532	7257	5487	6653
MEAN	764	1052	937	795	267	1266	2432	1308	518	234	177	222
MAX	1480	4110	2490	2920	420	3500	8370	3170	1370	352	374	615
MIN	323	543	380	450	215	220	1350	481	226	159	109	104
CFSM	1.11	1.53	1.36	1.15	.39	1.84	3.53	1.90	.75	.34	.26	.32
IN.	1.28	1.70	1.57	1.33	.42	2.12	3.93	2.19	.84	.39	.30	.36

CAL YR 1979 TOTAL 487558 MEAN 1336 MAX 14000 MIN 150 CFSM 1.94 IN 26.29
WTR YR 1980 TOTAL 304360 MEAN 832 MAX 8370 MIN 104 CFSM 1.21 IN 16.41

01144500 CONNECTICUT RIVER AT WEST LEBANON, NH

LOCATION.--Lat 43°38'46", long 72°18'46", Grafton County, Hydrologic Unit 01080104, on left bank 50 ft (15 m) downstream from railroad bridge at West Lebanon, 500 ft (150 m) downstream from White River, and at mile 215.0 (345.9 km).

DRAINAGE AREA.--4,092 mi^2 (10,598 km^2).

PERIOD OF RECORD.--Discharge: October 1911 to November 1976 (published as "at White River Junction, VT"), November 1978 to current year.
Water-quality records: Water year 1954.

REVISED RECORDS.--WSP 741: 1932 (adjusted monthly and yearly figures only). WSP 781: 1928(M). WSP 891: Drainage area. WSP 1301: 1922-26(M).

GAGE.--Water-stage recorder. Datum of gage is 321.52 ft (97.999 m) National Geodetic Vertical Datum of 1929. Prior to June 16, 1918, nonrecording gage on downstream side of pier of railroad bridge 50 ft (15 m) upstream at same datum. June 16, 1918, to Nov. 2, 1930, nonrecording gage at various locations on upstream and downstream sides of railroad bridge at same datum.

REMARKS.--Records good except those for winter period and period of no gage-height record, Oct. 20 to Nov. 20, Apr. 1 to May 6, Aug. 2 to Sept. 9, which are fair. Flow regulated by powerplants and by First Connecticut and Second Connecticut Lakes, Lake Francis, Moore and Comerford Reservoirs, Union Village Reservoir (Reservoirs in Connecticut River basin), and other reservoirs, combined usable capacity, about 17,200,000,000 ft^3 (487,000,000 m^3). Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--66 years (water years 1912-76, 80), 7,107 ft^3/s (201.3 m^3/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 136,000 ft^3/s (3,850 m^3/s) Nov. 4, 1927, gage height, 35.0 ft (10.67 m), present site, from rating curve extended above 70,000 ft^3/s (1,980 m^3/s); minimum daily, 82 ft^3/s (2.32 m^3/s) Aug. 8, 1965.
Stage and discharge of the flood of Nov. 4, 1927, are the greatest since at least 1760.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 31,800 ft^3/s (901 m^3/s) Apr. 11, gage height, 14.64 ft (4.462 m); maximum gage height, unknown; minimum discharge, unknown; minimum daily, 846 ft^3/s (24.0 m^3/s) Oct. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3940	2400	6600	2100	3100	950	8200	11000	2230	2780	3580	1300
2	2500	2300	3800	3500	1800	900	8400	10000	5390	2950	4400	4500
3	2400	6700	7200	4500	1400	2500	8600	8800	5660	1950	2300	6000
4	5500	7600	5400	5800	2100	2200	9200	6700	6210	2060	4500	4400
5	1800	7800	5800	1700	3200	2500	12000	7100	6510	3600	5200	3300
6	846	6700	6500	1600	3300	1900	6200	8000	4810	1690	2800	980
7	2050	5800	4100	4400	3000	1800	9600	12400	2900	2250	2800	940
8	3630	6100	2800	2900	2200	1000	8000	14600	1800	2240	2700	2900
9	2310	6800	1700	2400	1000	1100	7800	13800	3900	2890	1700	2100
10	2240	4900	4100	2900	1200	2900	21000	13100	3800	2890	1800	2430
11	1840	4200	3000	3000	2700	3100	26000	10700	4700	2320	2700	2210
12	2660	3400	4100	7600	2500	3500	24000	9710	4200	1250	2800	1300
13	3170	3700	4800	2600	2200	3000	23000	10700	3150	1280	2400	1200
14	3590	4900	5400	5000	1800	3100	19000	8530	1530	2380	2400	1030
15	2940	3800	2540	6600	1500	1400	19500	7520	1470	2870	2500	3320
16	3040	2800	1800	6000	950	1000	18000	7120	3870	2410	1300	4160
17	2560	2100	3340	6500	950	4500	16000	5190	3870	2170	1000	4120
18	3570	2000	5150	6100	950	8000	14000	4740	3090	1810	2100	4330
19	2940	3900	5220	4200	3100	9000	9400	9390	2580	1370	2800	3410
20	2700	3900	4490	2900	3600	8000	7400	8180	2290	1100	3500	3240
21	1700	4100	3030	5400	2000	9800	7000	8980	1450	3300	2800	1680
22	3100	2170	1120	4800	1900	10000	8000	8990	1450	3560	2500	5800
23	3400	2660	1300	4700	1600	8810	8800	8820	2510	3490	2200	6620
24	3900	3480	3000	3400	1300	9930	9800	4310	3310	3780	1200	6730
25	5000	2110	9000	3000	1800	10200	8400	2280	2820	3650	1900	6570
26	3900	5930	10500	1300	1600	8490	9800	3060	2640	2170	3900	6820
27	4500	11500	9200	1200	3300	7780	13000	4770	2700	1590	1900	6940
28	3800	9500	8200	3500	1800	9750	15000	3880	1370	4020	1800	4110
29	3500	11000	4600	3000	2300	10300	14500	4080	1190	3930	1900	4800
30	3100	9200	3600	3800	---	9930	14000	4070	2580	4440	1600	5120
31	2600	---	6500	2900	---	10400	---	2810	---	4430	1800	---
TOTAL	94726	153450	147890	119300	60150	167740	383600	243330	95980	82620	78780	112360
MEAN	3056	5115	4771	3848	2074	5411	12790	7849	3199	2665	2541	3745
MAX	5500	11500	10500	7600	3600	10400	26000	14600	6510	4440	5200	6940
MIN	846	2000	1120	1200	950	900	6200	2280	1190	1100	1000	940

CAL YR 1979 TOTAL 2668718 MEAN 7312 MAX 46600 MIN 749
WTR YR 1980 TOTAL 1739926 MEAN 4754 MAX 26000 MIN 846

01150500 MASCOMA RIVER AT MASCOMA, NH

LOCATION.--Lat 43°39'01", long 72°11'05", Grafton County, Hydrologic Unit 01080104, on left bank at Mascoma, 250 ft (76 m) downstream from railroad bridge, 1,000 ft (300 m) downstream from outlet of Mascoma Lake, and 9.9 mi (15.9 km) upstream from mouth.

DRAINAGE AREA.--153 mi^2 (396 km^2).

PERIOD OF RECORD.--August 1923 to current year.

REVISED RECORDS.--WSP 726: Drainage area. WSP 801: 1925(M).

GAGE.--Water-stage recorder. Altitude of gage is 740 ft (226 m), from topographic map.

REMARKS.--Records good except those for period of no gage-height record Apr. 1 to May 5, Aug. 19 to Sept. 10, which are poor. Flow regulated by Mascoma and Crystal Lakes and Goose and Grafton Ponds (Reservoirs in Connecticut River basin). Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--57 years, 214 ft^3/s (6.060 m^3/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,840 ft^3/s (165 m^3/s) Mar. 19, 1936, gage height, 7.50 ft (2.286 m), from rating curve extended above 2,500 ft^3/s (71 m^3/s) on basis of computations of flow over dams at gage heights 6.85 ft (2.088 m) and 7.50 ft (2.286 m); minimum daily, 2 ft^3/s (0.06 m^3/s) Feb. 3, 1939, Sept. 1, 1940.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,520 ft^3/s (43.0 m^3/s) occurred between Mar. 31 and May 6, gage height, 3.98 ft (1.213 m) from peak-stage indicator; minimum daily, 24 ft^3/s (0.68 m^3/s) Mar. 6, 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	129	150	178	53	26	50	407	60	37	37	28
2	33	130	143	163	54	25	109	403	45	37	38	30
3	35	207	135	150	61	25	130	401	34	38	38	32
4	198	300	112	134	50	25	341	397	45	38	39	36
5	382	299	98	121	54	25	312	246	68	38	40	38
6	363	287	99	112	46	24	300	148	123	38	40	40
7	286	274	101	104	47	24	53	156	151	37	40	38
8	119	258	101	98	45	25	53	185	136	37	39	37
9	120	250	100	93	47	27	53	217	124	37	36	35
10	119	253	99	88	47	27	947	241	117	38	36	34
11	120	254	98	84	49	33	1010	244	82	38	33	33
12	120	253	97	90	41	35	1120	247	47	38	31	33
13	121	241	99	94	56	43	974	241	46	38	30	33
14	124	228	100	96	36	51	855	205	46	37	30	32
15	125	244	98	96	35	51	759	185	46	37	30	32
16	127	247	96	96	39	37	734	187	47	37	29	30
17	127	209	97	96	34	39	353	184	48	39	29	27
18	127	191	97	94	29	55	353	178	48	39	28	28
19	127	191	94	92	28	75	351	216	41	39	28	28
20	127	119	89	91	28	108	349	249	33	38	27	29
21	127	55	84	88	27	198	343	218	36	38	26	29
22	127	79	80	86	27	436	398	199	41	41	24	29
23	126	82	78	83	28	403	254	186	46	42	24	30
24	146	85	78	79	27	383	254	171	48	43	24	29
25	156	88	96	75	27	378	254	157	49	42	26	29
26	149	94	150	71	27	369	281	144	49	42	26	28
27	143	110	216	68	27	346	283	102	47	41	26	28
28	138	135	231	65	27	251	285	65	45	40	26	28
29	135	150	236	62	26	50	287	64	36	39	26	29
30	132	154	203	66	---	143	407	62	40	38	27	28
31	131	---	189	64	---	303	---	61	---	37	28	---
TOTAL	4441	5596	3744	2977	1122	4040	12252	6366	1824	1198	961	940
MEAN	143	187	121	96.0	38.7	130	408	205	60.8	38.6	31.0	31.3
MAX	382	300	236	178	61	436	1120	407	151	43	40	40
MIN	31	55	78	62	26	24	50	61	33	37	24	27

CAL YR 1979 TOTAL 79249 MEAN 217 MAX 1710 MIN 28
WTR YR 1980 TOTAL 45461 MEAN 124 MAX 1120 MIN 24

01151500 OTTAUQUECHEE RIVER AT NORTH HARTLAND, VT

LOCATION.--Lat 43°36'09", long 72°21'17", Windsor County, Hydrologic Unit 01080106, on left bank 100 ft (30 m) upstream from highway bridge at North Hartland, 0.3 mi (0.5 km) downstream from North Hartland Dam, and 1.2 mi (1.9 km) upstream from mouth.

DRAINAGE AREA.--221 mi^2 (572 km^2).

PERIOD OF RECORD.--Discharge: October 1930 to current year.
Water-quality records: Water years 1954-55.

GAGE.--Water-stage recorder. Datum of gage is 336.77 ft (102.647 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Records good except those for winter period, which are fair. Flow regulated by powerplants upstream and by North Hartland Reservoir (Reservoir in Connecticut River basin) since March 1961; greater regulation by powerplants prior to 1958. Small seasonal storage in reservoir at Plymouth. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--50 years, 396 ft^3/s (11.21 m^3/s), 24.33 in/yr (623 mm/yr), adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,400 ft^3/s (691 m^3/s) Sept. 21, 1938, gage height, 17.68 ft (5.389 m), from rating curve extended above 6,200 ft^3/s (180 m^3/s) on basis of computations of flow over dams at gage heights 15.58 ft (4.749 m), 17.68 ft (5.389 m), and 21.5 ft (6.55 m); minimum, 2.9 ft^3/s (0.082 m^3/s) July 31, 1933; minimum daily, 3.8 ft^3/s (0.11 m^3/s) July 3, 1933. Maximum discharge since construction of North Hartland Dam in March 1961, 6,170 ft^3/s (175 m^3/s) Mar. 17, 1977, gage height, 8.67 ft (2.643 m).

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1760, 21.5 ft (6.55 m) in November 1927, from floodmarks, discharge 30,400 ft^3/s (861 m^3/s), by computation of peak flow over dam.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,730 ft^3/s (77.3 m^3/s) Apr. 14, gage height, 6.34 ft (1.932 m); minimum, 16.3 ft^3/s (0.46 m^3/s) Aug. 15; minimum daily, 23 ft^3/s (0.65 m^3/s) Aug. 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	66	158	390	290	100	74	781	947	152	55	58	67
2	67	156	387	230	96	72	627	628	163	83	57	76
3	77	208	381	210	92	70	675	480	276	97	76	159
4	255	443	339	210	86	70	721	474	953	97	105	202
5	316	509	318	135	88	70	943	452	467	97	115	146
6	314	331	307	135	84	70	916	399	220	97	115	95
7	316	253	303	155	80	78	756	573	231	71	115	53
8	313	253	305	155	84	94	676	783	257	67	114	38
9	308	253	278	155	84	120	722	798	282	102	85	37
10	189	252	247	150	84	176	966	698	290	102	65	37
11	136	255	239	160	84	206	1860	591	206	102	103	37
12	162	256	239	300	76	165	2540	527	169	102	117	36
13	244	256	254	382	76	136	2400	508	169	110	48	36
14	310	255	274	374	78	135	2290	309	169	116	23	55
15	322	253	274	369	78	126	1850	177	168	110	30	46
16	318	222	206	364	76	122	1720	266	165	75	54	47
17	314	207	178	355	76	119	1120	350	161	87	54	52
18	218	202	180	250	76	973	778	303	161	84	51	52
19	168	178	153	115	76	1220	641	377	161	81	41	52
20	167	178	128	160	82	544	587	490	138	81	35	57
21	167	186	126	185	86	551	593	422	124	80	35	58
22	174	170	126	155	86	669	595	381	149	79	35	57
23	162	163	157	150	86	756	592	344	148	79	55	58
24	169	177	196	160	78	1200	536	249	125	79	59	58
25	174	184	329	145	74	1280	469	209	116	102	55	85
26	174	184	672	140	74	786	451	211	100	112	55	119
27	174	1110	786	135	78	565	477	211	92	111	49	158
28	172	1430	756	150	80	743	487	178	70	88	38	149
29	172	609	603	145	76	952	520	161	40	77	37	130
30	170	442	419	125	---	1210	858	159	46	64	37	113
31	161	---	356	115	---	1240	---	152	---	58	57	---
TOTAL	6449	9733	9906	6259	2374	14592	29147	12807	5968	2745	1973	2365
MEAN	208	324	320	202	81.9	471	972	413	199	88.5	63.6	78.8
MAX	322	1430	786	382	100	1280	2540	947	953	116	117	202
MIN	66	156	126	115	74	70	451	152	40	55	23	36
MEAN†	211	316	311	199	82.6	480	972	420	199	88.2	63.3	78.8
CFSM†	.95	1.43	1.41	.90	.37	2.17	4.40	1.90	.90	.40	.29	.36
IN†	1.10	1.59	1.62	1.04	.40	2.51	4.91	2.19	1.00	.46	.33	.40

CAL YR 1979 TOTAL 168739.4 MEAN 462 MAX 4640 MIN 6.5 MEAN† 462 CFSM† 2.09 IN† 28.41
WTR YR 1980 TOTAL 104318.0 MEAN 285 MAX 2540 MIN 23 MEAN† 285 CFSM† 1.29 IN† 17.56

† Adjusted for change in contents in North Hartland Reservoir.

01152500 SUGAR RIVER AT WEST CLAREMONT, NH

LOCATION.--Lat 43°23'15", long 72°21'45", Sullivan County, Hydrologic Unit 01080104, on right bank 0.2 mi (0.3 km) downstream from Redwater Brook at West Claremont and 2.4 mi (3.9 km) upstream from mouth.

DRAINAGE AREA.--269 mi^2 (697 km^2).

PERIOD OF RECORD.--Discharge: May 1928 to current year. Published as "at Claremont" prior to October 1928. Water-quality records: Water year 1954.

REVISED RECORDS.--WSP 711: 1930(M). WSP 756: Drainage area. WSP 1901: 1960 (adjusted figures only).

GAGE.--Water-stage recorder. Datum of gage is 358.78 ft (109.356 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Oct. 1, 1928, nonrecording gage at site 0.8 mi (1.3 km) upstream at different datum.

REMARKS.--Records good except those for winter period and those for period of no gage-height record Nov. 2 to Dec. 4, which are fair. Regulation by Sunapee Lake 25 mi (40 km) upstream (Reservoirs in Connecticut River basin) and occasional diurnal fluctuation at low flow by mills upstream; greater regulation by mills prior to 1971.

AVERAGE DISCHARGE.--52 years, 402 ft^3/s (11.38 m^3/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,000 ft^3/s (396 m^3/s) Mar. 19, 1936, gage height, 10.92 ft (3.328 m), from rating curve extended above 6,700 ft^3/s (190 m^3/s) on basis of computations of flow over dam at gage heights 10.49 ft (3.197 m) and 10.92 ft (3.328 m); maximum gage height, 11.80 ft (3.597 m) Mar. 12, 1936, ice jam; minimum daily discharge, 14 ft^3/s (0.40 m^3/s) Aug. 26, 1965.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,000 ft^3/s (85 m^3/s) and maximums (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Apr. 10	1330	*4260	121	6.11	1.862						

Minimum daily discharge, 32 ft^3/s (0.91 m^3/s) Sept. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	200	210	300	256	115	80	809	727	101	108	68	84
2	420	180	260	200	110	75	721	639	110	110	75	74
3	410	300	240	180	110	75	650	543	175	105	112	108
4	640	500	230	168	110	75	862	466	698	98	123	94
5	520	400	220	160	110	76	1050	411	762	91	102	87
6	450	330	210	158	105	77	807	364	569	93	91	80
7	350	250	200	150	100	80	708	370	407	87	111	75
8	270	240	190	150	95	98	670	484	312	86	109	70
9	260	260	180	150	95	215	637	522	253	105	92	55
10	295	300	170	150	90	190	3140	510	208	105	84	42
11	305	330	160	145	90	170	3230	446	177	101	78	37
12	293	330	160	298	90	150	2190	400	158	101	88	33
13	362	320	160	258	90	130	1700	366	144	92	97	32
14	325	320	150	220	90	125	1410	352	132	87	92	67
15	284	310	150	190	95	108	1400	322	122	80	87	70
16	250	280	150	170	95	111	1530	286	141	78	81	61
17	235	260	145	150	95	119	1380	256	147	78	75	60
18	259	250	145	140	95	1190	1210	235	132	74	70	79
19	259	230	145	140	95	934	1030	257	118	71	67	73
20	248	220	146	130	90	637	905	266	110	70	66	67
21	239	210	140	125	90	699	821	236	127	68	65	66
22	232	200	140	120	85	1520	713	215	147	71	64	66
23	239	190	197	110	85	922	612	199	139	73	63	64
24	242	180	193	110	85	871	548	186	121	76	61	61
25	192	220	430	110	85	880	505	172	109	78	59	61
26	203	250	954	110	85	716	491	159	97	77	58	87
27	471	330	638	115	85	631	508	143	91	71	59	90
28	652	440	474	115	80	688	509	128	88	69	58	82
29	455	390	401	120	80	850	549	118	84	67	57	77
30	329	340	355	120	---	1300	742	112	94	68	57	73
31	250	---	303	120	---	1050	---	106	---	74	82	---
TOTAL	10139	8570	7936	4838	2725	14842	32037	9996	6073	2612	2451	2075
MEAN	327	286	256	156	94.0	479	1068	322	202	84.3	79.1	69.2
MAX	652	500	954	298	115	1520	3230	727	762	110	123	108
MIN	192	180	140	110	80	75	491	106	84	67	57	32

CAL YR 1979 TOTAL 168424 MEAN 461 MAX 3740 MIN 56
WTR YR 1980 TOTAL 104294 MEAN 285 MAX 3230 MIN 32

01152800 BLACK RIVER AT COVERED BRIDGE, AT WEATHERSFIELD, VT

LOCATION.--Lat 43°23'55", long 72°31'14", Windsor County, Hydrologic Unit 01080106, on left bank 540 ft (165 m) downstream from covered bridge, 0.3 mi (0.5 km) west of Downers, and 1.7 mi (2.7 km) north of Perkinsville (Weathersfield Town Hall).

DRAINAGE AREA.--114 mi^2 (295 km^2).

PERIOD OF RECORD.--December 1975 to current year.

GAGE.--Water-stage recorder. Datum of gage is 565.33 ft (172.313 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1977, at datum 2.00 ft (0.610 m) lower.

REMARKS.--Records good except those for winter period, which are poor. Flow regulated by powerplant and mills upstream. High flow slightly affected by retarding reservoirs. Several observations of water temperature and specific conductance were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,400 ft^3/s (323 m^3/s) Mar. 14, 1977, gage height, 8.75 ft (2.667 m), present datum, from rating curve extended above 4,100 ft^3/s (120 m^3/s); maximum gage height, 11.81 ft (3.600 m) Mar. 6, 1979 (ice jam); maximum gage height unaffected by backwater, 10.64 ft (3.234 m), present datum, Aug. 10, 1976; minimum daily discharge, 8.0 ft^3/s (0.23 m^3/s) Sept. 14, 1980.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 30, 1973, reached a discharge of 15,100 ft^3/s (428 m^3/s), by slope-area measurement 2.4 mi (3.9 km) upstream.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,500 ft^3/s (71 m^3/s) and maximums (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Nov. 27	0030	2830	80.1	5.99	1.826	Mar. 21	2215	2770	78.4	5.96	1.817
Mar. 18	1230	6960	197	7.62	2.323	Apr. 10	0500	a*7540	214	7.79	2.374

a From rating curve extended above 4,100 ft^3/s (120 m^3/s).

Minimum daily discharge, 8.0 ft^3/s (0.23 m^3/s) Sept. 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	51	93	249	147	48	34	646	461	71	55	59	108
2	93	89	213	156	45	34	597	385	87	52	181	103
3	140	400	185	126	43	33	566	331	454	50	123	115
4	380	373	174	105	42	33	821	292	760	41	99	105
5	213	248	165	92	39	32	774	249	443	43	80	83
6	419	210	152	80	39	33	594	233	291	48	74	67
7	313	192	190	76	38	34	568	379	224	64	67	60
8	210	167	182	80	37	37	610	433	229	49	53	44
9	169	166	147	82	36	45	861	350	208	74	53	37
10	182	267	138	82	36	100	4700	252	167	76	63	34
11	150	236	136	82	35	105	2520	239	148	85	84	29
12	173	194	148	250	35	90	1070	259	145	197	66	27
13	312	181	152	230	34	70	926	238	119	140	67	27
14	245	165	150	200	34	58	777	250	96	95	53	8.0
15	196	154	121	180	33	60	875	228	78	66	46	56
16	167	149	130	162	33	64	712	181	98	68	36	53
17	145	132	175	148	34	86	536	151	96	62	35	46
18	129	118	110	133	34	1610	444	141	92	54	52	53
19	120	123	99	110	34	430	383	187	82	45	33	82
20	110	118	95	106	35	356	346	172	84	42	33	49
21	105	111	90	90	37	941	371	155	88	40	36	61
22	100	106	100	88	39	1150	340	145	88	45	36	44
23	110	106	120	80	39	765	298	144	80	50	31	48
24	125	101	207	74	39	704	267	120	65	60	27	48
25	140	109	620	70	38	639	280	110	68	74	25	42
26	130	308	527	66	38	465	270	88	51	51	27	66
27	110	1250	383	63	37	459	245	96	56	56	27	81
28	100	623	284	60	36	621	253	82	36	53	25	72
29	90	403	239	56	35	746	572	83	53	40	25	67
30	78	309	201	53	---	1130	584	66	63	32	24	61
31	70	---	171	50	---	730	---	78	---	33	56	---
TOTAL	5075	7201	6053	3377	1082	11694	22806	6578	4620	1940	1696	1776.0
MEAN	164	240	195	109	37.3	377	760	212	154	62.6	54.7	59.2
MAX	419	1250	620	250	48	1610	4700	461	760	197	181	115
MIN	51	89	90	50	33	32	245	66	36	32	24	8.0
CFSM	1.44	2.11	1.71	.96	.33	3.31	6.67	1.86	1.35	.55	.48	.52
IN.	1.66	2.35	1.98	1.10	.35	3.82	7.44	2.15	1.51	.63	.55	.58

CAL YR 1979 TOTAL 108031.0 MEAN 296 MAX 5930 MIN 26 CFSM 2.60 IN 35.25
WTR YR 1980 TOTAL 73898.0 MEAN 202 MAX 4700 MIN 8.0 CFSM 1.77 IN 24.11

01153000 BLACK RIVER AT NORTH SPRINGFIELD, VT

LOCATION.--Lat 43°20'00", long 72°30'55", Windsor County, Hydrologic Unit 01080106, on right bank at North Springfield, 800 ft (250 m) downstream from North Springfield Dam, 1,300 ft (400 m) upstream from Great Brook, and 8.1 mi (13.0 km) upstream from mouth.

DRAINAGE AREA.--158 mi^2 (409 km^2).

PERIOD OF RECORD.--Discharge: October 1929 to current year. October 1929 monthly discharge only, published in WSP 1301.
Water-quality records: Water years 1954-55.

REVISED RECORDS.--WSP 756: Drainage area. WSP 781: 1931(M), 1934(M).

GAGE.--Water-stage recorder. Datum of gage is 445.79 ft (135.877 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Records good except those for winter period, which are fair. Flow regulated by powerplant and mills upstream and by North Springfield Reservoir (Reservoirs in Connecticut River basin) since November 1960. High flow slightly affected by retarding reservoirs since 1968. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--51 years, 290 ft^3/s (8.213 m^3/s), 24.93 in/yr (633 mm/yr), adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,500 ft^3/s (439 m^3/s) Sept. 22, 1938, gage height, 17.68 ft (5.389 m), from rating curve extended above 3,200 ft^3/s (91 m^3/s) on basis of computations of flow over dams at gage heights 16.41 ft (5.00 m) and 17.68 ft (5.389 m); minimum daily, 7.0 ft^3/s (0.20 m^3/s) Nov. 13, 1973. Maximum discharge since construction of North Spingfield Dam in 1960, 3,550 ft^3/s (101 m^3/s) Apr. 11, 1962, gage height, 6.43 ft (1.960 m); maximum gage height, 7.24 ft (2.207 m) Apr. 6, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,670 ft^3/s (75.6 m^3/s) Apr. 11, gage height, 6.35 ft (1.935 m); minimum daily, 12 ft^3/s (0.34 m^3/s) Oct. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	56	129	362	216	66	51	777	648	91	68	39	105
2	106	111	270	213	64	50	747	520	115	63	199	119
3	126	414	220	193	59	47	664	441	482	61	178	122
4	535	569	210	152	56	48	862	374	949	54	124	122
5	318	383	200	126	55	50	1020	313	731	51	99	101
6	476	304	210	113	54	49	719	290	379	55	89	78
7	422	265	220	108	54	50	661	407	290	68	76	65
8	258	250	220	110	53	97	703	552	301	63	60	51
9	237	216	175	113	52	93	797	471	272	87	52	45
10	233	340	160	113	51	140	1550	361	222	91	58	41
11	201	367	160	113	50	145	2180	301	202	76	87	37
12	195	280	175	356	50	111	2470	313	184	248	83	32
13	414	260	175	223	49	93	2190	290	163	181	69	31
14	336	241	175	220	47	78	1790	294	133	111	65	34
15	245	222	140	190	46	82	1240	301	130	83	61	32
16	228	213	140	185	47	113	1280	238	125	85	46	60
17	192	199	200	170	48	78	1280	210	124	76	44	39
18	171	171	140	170	49	697	660	181	119	66	41	63
19	158	176	110	160	50	712	557	222	95	55	44	83
20	152	169	100	150	55	476	493	238	103	52	41	58
21	145	165	95	130	55	755	503	216	111	48	41	61
22	135	170	96	120	56	1320	466	193	111	55	41	44
23	153	163	120	110	55	1190	421	190	99	60	41	51
24	179	157	140	105	54	967	357	163	81	76	36	48
25	204	158	477	100	55	837	366	153	85	83	32	46
26	171	217	731	92	56	620	366	119	57	58	34	65
27	151	993	780	88	54	559	328	124	68	66	34	93
28	138	1200	450	85	52	695	332	107	44	45	32	81
29	131	659	554	80	52	833	624	109	57	58	32	68
30	124	442	322	75	---	1180	851	85	69	42	30	61
31	91	---	262	72	---	1090	---	95	---	36	48	---
TOTAL	6681	9603	7789	4451	1544	13306	27254	8519	5992	2321	1956	1936
MEAN	216	320	251	144	53.2	429	908	275	200	74.9	63.1	64.5
MAX	535	1200	780	356	66	1320	2470	648	949	248	199	122
MIN	56	111	95	72	46	47	328	85	44	36	30	31
MEAN†	216	323	250	142	53	440	901	272	200	74	63	65
CFSM†	1.37	2.04	1.58	0.90	0.34	2.78	5.70	1.72	1.27	0.47	0.40	0.41
IN†	1.57	2.28	1.82	1.04	0.36	3.21	6.36	1.99	1.41	0.54	0.46	0.46

CAL YR 1979 TOTAL 138866 MEAN 380 MAX 3110 MIN 27 MEAN† 381 CFSM† 2.41 IN† 32.70
WTR YR 1980 TOTAL 91352 MEAN 250 MAX 2470 MIN 30 MEAN† 250 CFSM† 1.58 IN† 21.51

† Adjusted for change in contents in North Springfield Reservoir.

01153500 WILLIAMS RIVER AT BROCKWAYS MILLS, VT

LOCATION.--Lat 43°12'31", long 72°31'05", Windham County, Hydrologic Unit 01080107, on left bank 25 ft (7.6 m) upstream from highway bridge at Brockways Mills, 4 mi (6.4 km) downstream from Hall Brook, 4.6 mi (7.4 km) upstream from mouth, and 6 mi (9.7 km) northwest of Bellows Falls.

DRAINAGE AREA.--103 mi^2 (267 km^2).

PERIOD OF RECORD.--Discharge: June 1940 to current year.
Water-quality records: Water years 1957, 1967-74.

REVISED RECORDS.--WSP 1031: 1943-44(P). WSP 1301: 1941-42(M).

GAGE.--Water-stage recorder. Datum of gage is 433.54 ft (132.143 m) National Geodetic Vertical Datum of 1929 (levels by private engineer).

REMARKS.--Records good except those for winter period and period of doubtful gage-height record Apr. 15 to July 15, which are fair. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--40 years, 173 ft^3/s (4.899 m^3/s), 22.81 in/yr (579 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,800 ft^3/s (334 m^3/s) Aug. 10, 1976, gage height, 15.85 ft (4.831 m), from rating curve extended above 3,300 ft^3/s (93 m^3/s) on basis of slope-area measurement at gage height 13.31 ft (4.057 m); minimum not determined, occurred Dec. 11, 1941, during period of ice effect; minimum daily, 3.6 ft^3/s (0.10 m^3/s) Aug. 27, 1949.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in September 1938 had greatest discharge since at least 1753, gage height, 22.7 ft (6.92 m), from floodmarks. Flood in November 1927 reached a stage possibly 2 ft (1 m) higher than that of September 1938 flood because of backwater from milldam, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,600 ft^3/s (74 m^3/s) and maximum (*):

Date	Time	Discharge		Gage height		Date	Time	Discharge		Gage height	
		(ft^3/s)	(m^3/s)	(ft)	(m)			(ft^3/s)	(m^3/s)	(ft)	(m)
Mar. 21	2230	3180	90.1	7.71	2.350	Mar. 25	0600	*5650	160	10.35	3.155

Minimum discharge, 12 ft^3/s (0.34 m^3/s) Sept. 13, 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	46	52	133	115	32	24	450	272	55	44	14	31
2	128	53	122	133	30	23	416	238	66	34	19	26
3	145	288	105	109	29	23	375	214	251	33	18	28
4	297	208	110	75	28	23	717	194	331	29	17	26
5	118	139	103	100	27	24	580	179	148	26	16	22
6	237	118	100	82	26	24	408	171	96	36	17	22
7	132	106	138	70	25	24	391	241	105	30	17	20
8	98	98	117	74	24	40	383	325	136	27	16	18
9	100	89	85	80	24	216	559	229	111	43	15	15
10	119	162	97	70	24	243	3350	192	87	30	13	14
11	92	157	92	62	24	214	1480	173	74	26	18	13
12	112	126	93	188	23	120	717	167	66	32	28	13
13	213	112	93	111	23	69	618	169	59	26	25	12
14	132	110	81	91	23	57	481	179	53	22	21	18
15	105	104	50	91	22	62	777	157	48	20	21	25
16	93	98	87	81	22	57	551	143	73	18	20	23
17	79	90	129	71	22	62	397	130	53	19	18	19
18	73	88	47	74	22	846	337	134	41	17	17	33
19	68	82	43	80	23	356	299	185	37	15	17	27
20	64	78	45	75	26	237	274	148	35	15	18	23
21	61	76	46	62	26	937	269	125	39	20	21	20
22	59	73	47	58	26	1160	241	117	35	25	21	20
23	57	73	48	52	26	491	229	102	32	20	19	18
24	90	72	52	48	26	514	217	91	29	18	17	17
25	101	78	497	45	26	479	203	89	27	16	15	15
26	78	297	356	43	26	344	196	76	26	14	15	32
27	68	691	218	41	25	366	188	71	25	16	15	27
28	63	261	173	38	24	479	207	66	24	16	15	23
29	61	189	155	37	24	594	444	62	24	15	14	20
30	58	152	145	35	---	1020	354	59	48	17	14	18
31	54	---	119	33	---	540	---	56	---	16	41	---
TOTAL	3201	4320	3726	2324	728	9668	16108	4754	2234	735	572	638
MEAN	103	144	120	75.0	25.1	312	537	153	74.5	23.7	18.5	21.3
MAX	297	691	497	188	32	1160	3350	325	331	44	41	33
MIN	46	52	43	33	22	23	188	56	24	14	13	12
CFSM	1.00	1.40	1.17	.73	.24	3.03	5.21	1.49	.72	.23	.18	.21
IN.	1.16	1.56	1.35	.84	.26	3.49	5.82	1.72	.81	.27	.21	.23

CAL YR 1979 TOTAL 84841 MEAN 232 MAX 5000 MIN 22 CFSM 2.25 IN 30.64
WTR YR 1980 TOTAL 49008 MEAN 134 MAX 3350 MIN 12 CFSM 1.30 IN 17.70

01154000 SAXTONS RIVER AT SAXTONS RIVER, VT

LOCATION.--Lat 43°08'14", long 72°29'17", Windham County, Hydrologic Unit 01080107, on right bank 130 ft (40 m) upstream from highway bridge, 0.8 mi (1.3 km) east of Saxtons River, 1.4 mi (2.3 km) upstream from Bundy Brook, and 3.9 mi (6.3 km) upstream from mouth.

DRAINAGE AREA.--72.2 mi^2 (187.0 km^2).

PERIOD OF RECORD.--Discharge: June 1940 to current year.
Water-quality record: Water year 1957.

REVISED RECORDS.--WSP 1301: 1948-49(M).

GAGE.--Water-stage recorder. Datum of gage is 395.51 ft (120.551 m) National Geodetic Vertical Datum of 1929 (levels by private engineer).

REMARKS.--Records good except those for winter period which are fair. Occasional diurnal fluctuation at low flow prior to 1962; fluctuation more frequent prior to 1946. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--40 years, 120 ft^3/s (3.398 m^3/s), 22.57 in/yr (573 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,460 ft^3/s (240 m^3/s) Aug. 10, 1976, gage height, 14.06 ft (4.285 m), from rating curve extended above 2,000 ft^3/s (57 m^3/s) on basis of slope-area measurements at gage heights 10.51 ft (3.203 m), 11.37 ft (3.466 m), and 13.26 ft (4.042 m); minimum, 1.9 ft^3/s (0.054 m^3/s) July 25, 1949; minimum daily, 2.4 ft^3/s (0.068 m^3/s) Aug. 6, 1955.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1869, 17.9 ft (5.46 m) in September 1938, from floodmarks (discharge not determined).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,750 ft^3/s (50 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar. 21	2230	1800	51.0	7.15	2.179	Apr. 10	0400	*4710	133	10.58	3.225

Minimum discharge, 3.3 ft^3/s (0.09 m^3/s) Sept. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	70	51	121	80	39	25	247	210	29	27	9.0	17
2	163	51	110	78	35	24	233	184	43	23	15	12
3	122	197	96	70	30	24	211	163	107	22	11	15
4	225	172	90	66	25	24	415	144	97	17	9.4	11
5	99	112	85	66	23	24	345	126	66	16	8.6	8.2
6	172	95	82	64	22	24	240	118	48	34	12	8.2
7	106	88	78	64	21	25	222	159	55	21	9.4	7.2
8	79	84	76	64	21	50	216	189	66	19	7.9	6.4
9	91	79	72	66	21	170	296	165	57	34	7.2	6.1
10	100	131	70	66	21	140	2330	142	48	23	6.6	5.6
11	80	133	68	68	20	80	875	122	42	17	9.0	5.4
12	103	106	65	70	20	60	492	116	38	19	13	5.1
13	185	95	64	70	20	50	396	107	34	16	10	4.9
14	117	93	62	70	20	40	338	122	31	13	8.6	6.6
15	90	85	62	70	20	35	535	109	30	12	9.4	12
16	81	82	62	65	21	35	396	97	70	11	8.6	9.4
17	72	76	60	64	22	35	306	87	40	13	7.2	7.9
18	67	75	60	59	23	360	261	78	30	13	6.6	24
19	63	74	58	58	23	140	232	97	27	9.8	6.4	15
20	60	74	58	54	23	150	210	97	27	9.4	6.6	11
21	59	74	58	52	24	572	193	81	31	14	7.2	9.8
22	55	75	58	50	24	724	176	75	27	22	6.9	9.0
23	52	76	67	48	25	322	165	68	23	17	6.6	8.2
24	85	80	75	46	25	305	153	60	19	13	5.8	7.2
25	83	100	313	45	26	299	146	55	17	9.8	5.6	6.9
26	67	140	236	45	26	231	142	46	15	8.6	5.6	17
27	62	160	154	45	25	225	132	41	14	10	5.4	15
28	57	170	118	44	25	261	155	36	13	9.8	5.4	10
29	55	160	100	43	26	322	319	34	12	12	5.1	9.0
30	52	140	90	42	---	575	276	32	30	13	5.4	8.2
31	49	---	82	40	---	326	---	30	---	9.8	27	---
TOTAL	2821	3128	2850	1832	696	5677	10653	3190	1186	508.2	267.5	298.3
MEAN	91.0	104	91.9	59.1	24.0	183	355	103	39.5	16.4	8.63	9.94
MAX	225	197	313	80	39	724	2330	210	107	34	27	24
MIN	49	51	58	40	20	24	132	30	12	8.6	5.1	4.9
CFSM	1.26	1.44	1.27	.82	.33	2.54	4.92	1.43	.55	.23	.12	.14
IN.	1.45	1.61	1.47	.94	.36	2.92	5.49	1.64	.61	.26	.14	.15

CAL YR 1979 TOTAL 52383.0 MEAN 144 MAX 2030 MIN 11 CFSM 1.99 IN 26.99
WTR YR 1980 TOTAL 33107.0 MEAN 90.5 MAX 2330 MIN 4.9 CFSM 1.25 IN 17.06

01154500 CONNECTICUT RIVER AT NORTH WALPOLE, NH

LOCATION.--Lat 43°07'34", long 72°26'14", Cheshire County, Hydrologic Unit 01080104, on left bank at North Walpole, 100 ft (30 m) upstream from Saxtons River, 0.7 mi (1.1 km) downstream from Vilas Bridge between Bellows Falls, VT, and North Walpole, NH, and at mile 172.5 (277.6 km).

DRAINAGE AREA.--5,493 mi^2 (14,227 km^2), includes that of Saxtons River.

PERIOD OF RECORD.--Discharge: March 1942 to current year.
Water-quality records: Water years 1954-55, 1971.

GAGE.--Water-stage recorder. Datum of gage is 218.63 ft (66.638 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records excellent except those for winter period, which are good. Flow regulated by powerplants and by First Connecticut and Second Connecticut Lakes, Lake Francis, Moore and Comerford Reservoirs (Reservoirs in Connecticut River basin), and other reservoirs, combined usable capacity, about 24,800,000,000 ft^3 (702,000,000 m^3).

AVERAGE DISCHARGE.--38 years, 9,331 ft^3/s (264.3 m^3/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 97,000 ft^3/s (2,750 m^3/s) Mar. 27, 1953, gage height, 30.37 ft (9.257 m); minimum daily, 115 ft^3/s (3.26 m^3/s) Aug. 31, 1952, Sept. 2, 1957.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1750, 43.8 ft (13.35 m) Mar. 19, 1936, from floodmarks.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 45,600 ft^3/s (1,291 m^3/s) Apr. 10, gage height, 18.99 ft (5.788 m); minimum daily, 1,200 ft^3/s (34.0 m^3/s) July 13, Sept. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3000	3450	11300	7340	3000	1500	16300	16100	2370	2980	3490	1660
2	4220	4100	7000	4860	1900	1300	12000	14100	5210	3300	5360	3770
3	4270	5140	7070	5170	2100	3910	12800	12000	6320	2210	2680	5840
4	6600	8420	8530	5960	3500	2790	14100	11600	11100	2350	4490	5890
5	7740	11900	6940	5570	2700	3460	19300	7920	9320	3790	4940	5390
6	2840	12400	7980	2490	3690	2030	12700	10400	7730	1490	4120	1220
7	4260	8300	8060	4760	3860	3750	10700	11800	4270	2320	3730	1200
8	4950	7750	5300	3680	3170	2090	9340	17600	3860	2510	3020	3190
9	5030	8810	2720	3490	2220	1340	11800	17200	6000	3000	1650	1970
10	3690	7090	5780	3930	2020	4310	34900	16200	5540	3290	1920	2360
11	3990	7100	4030	4720	3610	4080	43000	14800	6510	2950	4310	2260
12	4330	5540	4590	7480	3210	5370	37700	11500	5250	1650	3380	1420
13	5190	5150	7820	7750	2740	4720	34900	11600	3830	1200	3190	1300
14	4920	6610	6500	5310	1870	4070	28800	13200	2220	3270	3070	1310
15	6420	5770	4900	6300	2110	2590	28000	9950	1250	3200	2860	3530
16	6900	4320	2690	9030	1630	1440	26400	8440	4930	2510	1770	3380
17	5000	3890	5770	8930	1730	4320	23000	8130	4100	2370	1320	4300
18	5250	2630	4820	9010	1690	10500	19800	5710	3710	2310	2140	4800
19	5280	5540	6320	6870	3720	16600	16800	7660	3210	1420	3340	4010
20	4290	5800	6140	5120	4220	12400	10100	9470	3230	1540	3160	3160
21	3290	5850	4090	6180	2430	14600	11100	9880	2160	3960	2670	1230
22	4720	3750	2400	5420	2930	17200	8410	11000	1310	2910	2250	5370
23	4650	3670	2520	5610	2420	14400	11300	10100	2980	3040	1520	6970
24	4660	4680	4440	5450	1880	14500	11900	7600	3140	3660	1550	7030
25	5170	2880	7640	4730	2590	15500	12100	3950	3390	3620	1430	6460
26	6390	6330	15500	2210	2340	14800	11500	2280	3000	1940	4380	7730
27	5660	14000	15200	1630	3930	12600	15100	5210	3080	2470	2480	6840
28	5660	18600	13000	5070	2040	12400	18000	5270	1250	4320	1880	4660
29	5270	15200	9960	3700	4090	17000	18500	4930	1250	4340	2300	4970
30	4700	13600	7800	3300	---	17900	19600	4120	2870	4050	1210	5520
31	3600	---	6170	4500	---	14300	---	3800	---	3840	1860	---
TOTAL	151940	218270	212980	165570	79340	257770	559950	303520	124390	87810	87470	118740
MEAN	4901	7276	6870	5341	2736	8315	18670	9791	4146	2833	2822	3958
MAX	7740	18600	15500	9030	4220	17900	43000	17600	11100	4340	5360	7730
MIN	2840	2630	2400	1630	1630	1300	8410	2280	1250	1200	1210	1200

CAL YR 1979 TOTAL 3720820 MEAN 10190 MAX 70000 MIN 1250
WTR YR 1980 TOTAL 2367750 MEAN 6469 MAX 43000 MIN 1200

01155050 CONNECTICUT RIVER AT WALPOLE, NH
(National stream-quality accounting network station)

LOCATION.--Lat 43°05'04", long 72°26'04", Cheshire County, Hydrologic Unit 01080104, near left bank on downstream end of bridge pier on State Highway 123 at Walpole, 2.6 mi (4.2 km) downstream from Cold River, and at mile 169.6 (272.9 km).

DRAINAGE AREA.--5,612 mi^2 (14,535 km^2).

PERIOD OF RECORD.--Water years 1975 to September 1980 (discontinued).

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: September 1975 to June 1980 (discontinued).
WATER TEMPERATURES: September 1975 to July 1980 (discontinued).

INSTRUMENTATION.--Water-quality monitor since September 1975.

REMARKS.--Discharge based on record for gaging station at North Walpole (station 01154500). Interruptions in the record were due to malfunction of the instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum recorded, 175 micromhos Sept. 18, 1978; minimum recorded, 56 micromhos May 12, 1978, Jan. 4, 1979, Apr. 10, 12, 1980.
WATER TEMPERATURES: Maximum recorded, 28.0°C July 30, Aug. 5, 1979; minimum, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum recorded, 154 micromhos May 2, 8; minimum recorded, 56 micromhos Apr. 10, 12.
WATER TEMPERATURES: Maximum recorded, 25.0°C June 28; minimum recorded, 0.0°C on many days during winter period.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH FIELD (UNITS)	TEMPERATURE, WATER (DEG C)	TURBIDITY (NTU)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	COLIFORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS (MG/L AS CACO3)
OCT 29...	1100	6400	108	7.2	9.0	1.0	11.7	101	420	K30	39
NOV 28...	0930	19400	105	7.0	7.5	4.0	11.9	99	K880	390	44
DEC 12...	1030	3110	110	6.7	2.0	2.0	13.4	97	K970	24	39
JAN 23...	1045	7290	115	6.5	.0	.40	14.0	96	120	36	42
FEB 26...	1320	1450	125	7.0	.5	.50	12.5	87	54	K17	37
MAR 12...	1130	7310	150	7.1	.0	.45	13.5	92	96	140	43
APR 09...	1100	11800	81	6.9	5.0	1.0	12.6	98	560	200	36
MAY 14...	0930	12000	80	6.7	11.3	1.0	10.6	96	67	31	33
JUN 16...	1330	7210	101	7.1	18.5	.03	10.5	111	170	31	36
JUL 15...	0945	1240	125	7.0	22.8	.55	9.4	108	230	23	47
AUG 20...	1130	6890	113	6.8	21.7	.50	8.0	90	270	44	39
SEP 24...	0945	10200	110	6.9	19.3	.40	9.4	101	143	K6	15

DATE	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)
OCT 29...	12	13	1.5	6.1	1.2	27	7.5	6.9	.1	4.9	77
NOV 28...	15	15	1.5	4.1	1.2	29	9.0	5.6	.1	5.0	69
DEC 12...	2	13	1.6	6.0	1.2	37	9.9	8.6	.1	5.5	69
JAN 23...	4	14	1.6	5.5	1.1	38	9.8	8.6	.1	5.3	81
FEB 26...	4	12	1.6	5.8	1.0	33	9.9	8.7	.1	6.0	79
MAR 12...	15	14	1.9	9.0	1.4	28	11	13	.1	5.9	89
APR 09...	2	12	1.4	4.3	.9	34	7.7	6.3	.0	4.5	58
MAY 14...	8	11	1.3	3.5	.8	25	8.1	5.2	.1	4.8	62
JUN 16...	9	12	1.5	4.9	1.1	27	8.9	6.5	.1	4.3	72
JUL 15...	12	16	1.7	5.5	1.2	35	11	8.9	.1	2.8	81
AUG 20...	5	13	1.5	5.3	1.2	34	9.3	6.7	.2	4.1	80
SEP 24...	5	4.5	.9	8.2	1.1	10	6.9	12	.3	5.1	66

K, NON-IDEAL COLONY COUNT.

01155050 CONNECTICUT RIVER AT WALPOLE, NH--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)
OCT 29...	58	.18	.19	.030	.060	.18	.26	.43	.29	.05	.24
NOV 28...	60	.25	.23	.020	.010	.26	.38	.50	.40	.13	.27
DEC 12...	70	.32	.32	.000	.020	.38	.70	.72	.70	.30	.40
JAN 23...	70	.32	.33	.110	.060	.29	.24	.68	.35	.00	.35
FEB 26...	66	.31	.30	.090	.040	.20	.22	.54	.31	.07	.24
MAR 12...	75	.49	.49	.090	.080	.31	.29	.88	.38	.00	.39
APR 09...	59	.34	.35	.050	.010	.34	.15	.70	.20	.00	.35
MAY 14...	51	.34	.35	.040	.050	.16	.42	.56	.46	.25	.21
JUN 16...	57	.29	.29	.020	.000	.24	.22	.53	.24	.00	.24
JUL 15...	69	.19	.20	.050	.020	.30	.29	.52	.34	.02	.32
AUG 20...	63	.25	.26	.040	.020	.31	.29	.59	.33	.00	.33
SEP 24...	46	.12	.12	.170	.140	.21	.12	.47	.29	.00	.35

DATE	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, TOTAL (MG/L AS PO4)	PHOSPHORUS, DISSOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC SUSPENDED (MG/L AS C)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 29...	.47	.010	.03	.010	--	.4	4.8	1	8.6	100
NOV 28...	.65	.030	.09	.010	3.9	--	--	23	1210	100
DEC 12...	1.0	.010	.03	.010	2.7	--	--	6	50	60
JAN 23...	.67	.020	.06	.010	--	.4	3.0	2	39	83
FEB 26...	.62	.030	.09	.010	4.4	--	--	15	59	94
MAR 12...	.87	.060	.18	.040	4.6	--	--	3	59	83
APR 09...	.54	.020	.06	.010	--	.2	5.6	5	159	93
MAY 14...	.80	.020	.06	.010	20	--	--	2	65	100
JUN 16...	.53	.020	.06	.010	2.1	--	--	4	78	98
JUL 15...	.53	.020	.06	.010	--	.6	2.5	--	--	--
AUG 20...	.58	.020	.06	.020	2.3	--	--	12	223	100
SEP 24...	.41	.070	.21	.060	3.0	--	--	6	165	100

01155050 CONNECTICUT RIVER AT WALPOLE, NH--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS-PENDED TOTAL (UG/L AS AS)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA)	BARIUM, SUS-PENDED RECOV-ERABLE (UG/L AS BA)	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CADMIUM SUS-PENDED RECOV-ERABLE (UG/L AS CD)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	CHRO-MIUM, SUS-PENDED RECOV. (UG/L AS CR)
OCT 29...	0	0	0	200	200	0	0	0	3	10	0
JAN 23...	0	0	0	100	80	20	0	0	0	<10	<0
FEB 26...	--	--	--	--	--	--	--	--	--	--	--
APR 09...	1	1	0	100	80	20	--	--	6	20	10
MAY 14...	--	--	--	--	--	--	--	--	--	--	--
JUN 16...	--	--	--	--	--	--	--	--	--	--	--
JUL 15...	1	0	1	<50	--	20	0	0	1	10	0
AUG 20...	--	--	--	--	--	--	--	--	--	--	--
SEP 24...	--	--	--	--	--	--	--	--	--	--	--

DATE	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV-ERABLE (UG/L AS CO)	COBALT, SUS-PENDED RECOV-ERABLE (UG/L AS CO)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	COPPER, SUS-PENDED RECOV-ERABLE (UG/L AS CU)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)
OCT 29...	<10	0	0	1	3	0	3	250	160	90	0
JAN 23...	<10	0	0	1	1	0	2	220	150	70	1
FEB 26...	--	--	--	--	--	--	--	--	--	--	--
APR 09...	10	0	0	0	3	0	3	340	270	70	1
MAY 14...	--	--	--	--	--	--	--	--	--	--	--
JUN 16...	--	--	--	--	--	--	--	--	--	--	--
JUL 15...	10	0	0	0	2	0	2	230	220	10	0
AUG 20...	--	--	--	--	--	--	--	--	--	--	--
SEP 24...	--	--	--	--	--	--	--	--	--	--	--

DATE	LEAD, SUS-PENDED RECOV-ERABLE (UG/L AS PB)	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	MERCURY SUS-PENDED RECOV-ERABLE (UG/L AS HG)	MERCURY DIS-SOLVED (UG/L AS HG)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	NICKEL, SUS-PENDED RECOV-ERABLE (UG/L AS NI)
OCT 29...	0	1	30	10	20	<.1	<.0	<.1	3	3
JAN 23...	1	0	30	10	20	<.1	<.0	<.1	8	5
FEB 26...	--	--	--	--	--	--	--	--	--	--
APR 09...	0	1	30	0	40	.1	.0	.1	2	0
MAY 14...	--	--	--	--	--	--	--	--	--	--
JUN 16...	--	--	--	--	--	--	--	--	--	--
JUL 15...	0	0	50	50	0	<.1	--	<.1	6	6
AUG 20...	--	--	--	--	--	--	--	--	--	--
SEP 24...	--	--	--	--	--	--	--	--	--	--

01155050 CONNECTICUT RIVER AT WALPOLE, NH--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, SUSPENDED TOTAL (UG/L AS SE)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, TOTAL RECOVERABLE (UG/L AS AG)	SILVER, SUSPENDED RECOVERABLE (UG/L AS AG)	SILVER, DISSOLVED (UG/L AS AG)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, SUSPENDED RECOVERABLE (UG/L AS ZN)	ZINC, DISSOLVED (UG/L AS ZN)
OCT 29...	0	0	0	0	--	--	0	10	0	10
JAN 23...	3	0	0	0	0	0	0	240	220	20
FEB 26...	--	--	--	--	1	--	--	--	--	--
APR 09...	3	0	0	0	0	0	0	20	0	40
MAY 14...	--	--	--	--	0	--	--	--	--	--
JUN 16...	--	--	--	--	1	--	--	--	--	--
JUL 15...	0	0	0	0	0	0	0	10	10	0
AUG 20...	--	--	--	--	0	--	--	--	--	--
SEP 24...	--	--	--	--	1	--	--	--	--	--

01155050 CONNECTICUT RIVER AT WALPOLE, NH--Continued

QUALITATIVE AND QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

PHYTOPLANKTON

DATE	NOV 28,79	MAR 12,80	MAY 14,80	JUN 16,80
TIME	0930	1130	0930	1330
TOTAL CELLS/ML	2200	450	340	2400
DIVERSITY: DIVISION	0.3	1.1	1.1	1.1
.CLASS	0.3	1.2	1.1	1.1
..ORDER	0.6	1.4	1.8	1.7
...FAMILY	3.0	3.1	2.2	2.1
....GENUS	3.2	3.6	2.2	2.3

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)								
.CHLOROPHYCEAE								
..CHLOROCOCCALES								
...MICRACTINIACEAE								
....GOLENKINIA	--	-	--	-	--	-	160	7
....MICRACTINIUM	--	-	20	4	13	4	--	-
...OOCYSTACEAE								
....ANKISTRODESMUS	--	-	86‡	19	26	8	280	12
....CHLORELLA	--	-	5	1	--	-	60	3
....CHODATELLA	--	-	--	-	--	-	--	-
....DICTYOSPHAERIUM	--	-	--	-	--	-	80	3
....KIRCHNERIELLA	--	-	--	-	--	-	--	-
....SELENASTRUM	--	-	--	-	--	-	--	-
....TETRAEDRON	--	-	5	1	--	-	--	-
...SCENEDESMACEAE								
....SCENEDESMUS	73	3	--	-	--	-	--	-
..TETRASPORALES								
...PALMELLACEAE								
....SPHAEROCYSTIS	--	-	--	-	180‡	54	--	-
..VOLVOCALES								
...CHLAMYDOMONADACEAE								
....CHLAMYDOMONAS	--	-	5	1	--	-	80	3
CHRYSOPHYTA								
.BACILLARIOPHYCEAE								
..CENTRALES								
...COSCINODISCACEAE								
....CYCLOTELLA	36	2	10	2	--	-	1300‡	56
....MELOSIRA	--	-	--	-	39	12	--	-
....SKELETONEMA	73	3	--	-	--	-	--	-
..PENNALES								
...ACHNANTHACEAE								
....ACHNANTHES	130	6	--	-	--	-	--	-
...CYMBELLACEAE								
....AMPHORA	18	1	--	-	--	-	--	-
....CYMBELLA	400‡	18	30	7	39	12	40	2
...DIATOMACEAE								
....DIATOMA	550‡	25	75‡	17	--	-	--	-
...FRAGILARIACEAE								
....ASTERIONELLA	--	-	10	2	--	-	160	7
....FRAGILARIA	73	3	30	7	--	-	--	-
....HANNAEA	310	14	15	3	--	-	--	-
....SYNEDRA	--	-	45	10	--	-	--	-
...GOMPHONEMATACEAE								
....GOMPHONEMA	91	4	15	3	--	-	--	-
...NAVICULACEAE								
....NAVICULA	220	10	20	4	13	4	--	-
...NITZSCHIACEAE								
....NITZSCHIA	150	7	55	12	13	4	60	3
...TABELLARIACEAE								
....TABELLARIA	36	2	--	-	--	-	--	-
.CHRYSOPHYCEAE								
..CHRYSOMONADALES								
...MALLOMONADACEAE								
....MALLOMONAS	--	-	5	1	--	-	--	-
...OCHROMONADACEAE								
....OCHROMONAS	--	-	--	-	--	-	--	-
.XANTHOPHYCEAE								
..HETEROCOCCALES								
...CHLOROTHECIACEAE								
....OPHIOCYTIUM	--	-	--	-	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)								
.CYANOPHYCEAE								
..CHROOCOCCALES								
...CHROOCOCCACEAE								
....AGMENELLUM	--	-	--	-	--	-	--	-
....ANACYSTIS	--	-	--	-	--	-	120	5
..HORMOGONALES								
...NOSTOCACEAE								
....ANABAENA	--	-	--	-	--	-	--	-
...OSCILLATORIACEAE								
....OSCILLATORIA	--	-	--	-	--	-	--	-
...RIVULARIACEAE								
....RAPHIDIOPSIS	--	-	--	-	--	-	--	-

NOTE: ‡ - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15 PERCENT
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2 PERCENT

01155050 CONNECTICUT RIVER AT WALPOLE, NH--Continued

QUALITATIVE AND QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980--Continued

PHYTOPLANKTON

DATE	NOV 28,79		MAR 12,80		MAY 14,80		JUN 16,80	
TIME	0930		1130		0930		1330	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
EUGLENOPHYTA (EUGLENOIDS)								
.EUGLENOPHYCEAE								
..EUGLENALES								
...EUGLENACEAE								
....TRACHELOMONAS	--	-	10	2	--	-	--	-
...PETALOMONADACEAE								
....CALYCOMONAS	18	1	--	-	--	-	--	-
PYRRHOPHYTA (FIRE ALGAE)								
.DINOPHYCEAE								
..PERIDINIALES								
...GLENODINIACEAE								
....GLENODINIUM	--	-	5	1	13	4	--	-
...PERIDINIACEAE								
....PERIDINIUM	--	-	--	-	--	-	--	-

NOTE: ‡ - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15 PERCENT
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2 PERCENT

01155050 CONNECTICUT RIVER AT WALPOLE, NH--Continued

QUALITATIVE AND QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980--Continued

PHYTOPLANKTON

DATE	JUL 15,80	AUG 20,80	SEP 24,80
TIME	0945	1130	0945
TOTAL CELLS/ML	11000	1100	170
DIVERSITY: DIVISION	1.6	1.1	1.2
.CLASS	1.7	1.2	1.2
..ORDER	2.5	1.8	1.9
...FAMILY	3.4	1.8	2.4
....GENUS	3.8	2.3	2.6

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)						
.CHLOROPHYCEAE						
..CHLOROCOCCALES						
...MICRACTINIACEAE						
....GOLENKINIA	97	1	--	-	--	-
....MICRACTINIUM	970	9	--	-	--	-
...OOCYSTACEAE						
....ANKISTRODESMUS	--	-	--	-	13	8
....CHLORELLA	--	-	--	-	--	-
....CHODATELLA	*	0	--	-	--	-
....DICTYOSPHAERIUM	770	7	--	-	--	-
....KIRCHNERIELLA	150	1	--	-	--	-
....SELENASTRUM	390	4	13	1	13	8
....TETRAEDRON	--	-	--	-	--	-
...SCENEDESMACEAE						
....SCENEDESMUS	680	6	--	-	--	-
..TETRASPORALES						
...PALMELLACEAE						
....SPHAEROCYSTIS	--	-	--	-	--	-
..VOLVOCALES						
...CHLAMYDOMONADACEAE						
....CHLAMYDOMONAS	480	4	13	1	--	-
CHRYSOPHYTA						
.BACILLARIOPHYCEAE						
..CENTRALES						
...COSCINODISCACEAE						
....CYCLOTELLA	1600	15	220‡	20	52‡	31
....MELOSIRA	--	-	260‡	24	--	-
....SKELETONEMA	--	-	--	-	--	-
..PENNALES						
...ACHNANTHACEAE						
....ACHNANTHES	190	2	13	1	--	-
...CYMBELLACEAE						
....AMPHORA	*	0	--	-	--	-
....CYMBELLA	--	-	--	-	--	-
...DIATOMACEAE						
....DIATOMA	--	-	--	-	--	-
...FRAGILARIACEAE						
....ASTERIONELLA	190	2	--	-	--	-
....FRAGILARIA	--	-	--	-	--	-
....HANNAEA	--	-	--	-	--	-
....SYNEDRA	--	-	--	-	13	8
...GOMPHONEMATACEAE						
....GOMPHONEMA	--	-	--	-	--	-
...NAVICULACEAE						
....NAVICULA	150	1	--	-	13	8
...NITZSCHIACEAE						
....NITZSCHIA	580	5	--	-	39‡	23
...TABELLARIACEAE						
....TABELLARIA	--	-	--	-	--	-
.CHRYSOPHYCEAE						
..CHRYSOMONADALES						
...MALLOMONADACEAE						
....MALLOMONAS	--	-	--	-	--	-
...OCHROMONADACEAE						
....OCHROMONAS	97	1	--	-	--	-
.XANTHOPHYCEAE						
..HETEROCOCCALES						
...CHLOROTHECIACEAE						
....OPHIOCYTIUM	--	-	13	1	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)						
.CYANOPHYCEAE						
..CHROOCOCCALES						
...CHROOCOCCACEAE						
....AGMENELLUM	680	6	--	-	--	-
....ANACYSTIS	1500	14	230‡	22	26‡	15
..HORMOGONALES						
...NOSTOCACEAE						
....ANABAENA	1500	13	--	-	--	-
...OSCILLATORIACEAE						
....OSCILLATORIA	390	4	310‡	29	--	-
...RIVULARIACEAE						
....RAPHIDIOPSIS	390	4	--	-	--	-

NOTE: ‡ - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15 PERCENT
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2 PERCENT

01155050 CONNECTICUT RIVER AT WALPOLE, NH--Continued

TATIVE AND QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980--Continued

PHYTOPLANKTON

DATE	JUL 15,80		AUG 20,80		SEP 24,80	
TIME	0945		1130		0945	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
EUGLENOPHYTA (EUGLENOIDS)						
.EUGLENOPHYCEAE						
..EUGLENALES						
...EUGLENACEAE						
....TRACHELOMONAS	--	-	--	-	--	-
...PETALOMONADACEAE						
....CALYCOMONAS	--	-	--	-	--	-
PYRRHOPHYTA (FIRE ALGAE)						
.DINOPHYCEAE						
..PERIDINIALES						
...GLENODINIACEAE						
....GLENODINIUM	--	-	--	-	--	-
...PERIDINIACEAE						
....PERIDINIUM	97	1	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15 PERCENT
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2 PERCENT

01155050 CONNECTICUT RIVER AT WALPOLE, NH--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	138	121	130	109	105	107	83	79	81	104	100	102
2	124	115	122	114	109	111	88	84	86	101	93	98
3	124	116	120	115	108	111	92	86	90	94	86	90
4	128	117	123	108	105	107	94	84	88	97	86	91
5	117	106	111	108	102	104	92	83	88	97	92	95
6	110	101	105	103	97	100	88	82	85	100	93	96
7	117	108	112	101	97	98	94	85	90	95	88	92
8	115	106	110	102	95	99	96	86	92	92	89	91
9	116	108	112	97	91	94	98	89	95	---	---	---
10	125	112	119	103	93	100	98	91	93	---	---	---
11	128	118	123	98	90	96	104	99	101	---	---	---
12	123	118	121	93	86	89	106	98	103	---	---	---
13	121	109	116	99	91	94	105	93	99	---	---	---
14	118	108	113	101	90	96	101	95	99	---	---	---
15	114	109	112	99	92	96	103	96	99	---	---	---
16	119	113	116	102	96	98	102	96	99	---	---	---
17	119	107	114	102	96	99	98	93	96	---	---	---
18	112	98	105	104	94	99	97	94	96	---	---	---
19	105	98	101	100	96	98	110	97	103	---	---	---
20	110	103	107	106	99	102	115	110	112	---	---	---
21	116	108	113	110	106	108	112	103	108	---	---	---
22	117	106	112	110	99	105	107	103	105	---	---	---
23	114	106	109	104	99	102	109	104	107	---	---	---
24	115	106	110	108	103	105	106	101	103	---	---	---
25	114	107	111	112	102	108	103	98	100	---	---	---
26	111	107	109	109	103	106	110	91	101	---	---	---
27	116	109	113	105	94	99	92	78	84	---	---	---
28	115	105	110	104	90	96	80	76	78	---	---	---
29	111	104	106	89	85	87	87	80	85	---	---	---
30	109	104	107	93	84	91	91	84	87	---	---	---
31	112	105	108	---	---	---	100	91	95	---	---	---
MONTH	138	98	113	115	84	100	115	76	95	104	86	94

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1							---	---	---	145	73	103
2							---	---	---	154	81	88
3							---	---	---	91	82	84
4							---	---	---	149	84	125
5							---	---	---	143	135	138
6							---	---	---	139	77	110
7							---	---	---	150	76	136
8							---	---	---	---	---	---
9							85	81	83	---	---	---
10							80	56	66	---	---	---
11							69	61	65	---	---	---
12							64	56	59	---	---	---
13							64	61	63	---	---	---
14							65	64	64	94	90	92
15							98	65	68	93	91	92
16							69	66	68	105	94	97
17							69	66	68	108	95	100
18							69	66	67	110	94	101
19							100	69	72	114	102	107
20							110	71	98	110	99	103
21							115	81	87	---	---	---
22							117	77	84	---	---	---
23							92	80	85	117	106	110
24							120	81	93	---	---	---
25							126	120	123	---	---	---
26							124	81	102	137	114	129
27							118	77	115	---	---	---
28							120	116	119	---	---	---
29							130	118	127	---	---	---
30							129	72	82	---	---	---
31							---	---	---	---	---	---
MONTH							130	56	84	154	73	107

01155050 CONNECTICUT RIVER AT WALPOLE, NH--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	125	113	118									
2	124	113	118									
3	117	105	110									
4	111	106	108									
5	112	105	109									
6	125	111	120									
7	119	109	112									
8	117	104	113									
9	111	107	109									
10	---	---	---									
11	---	---	---									
12	---	---	---									
13	---	---	---									
14	---	---	---									
15	---	---	---									
16	---	---	---									
17	---	---	---									
18	---	---	---									
19	---	---	---									
20	---	---	---									
21	---	---	---									
22	---	---	---									
23	---	---	---									
24	---	---	---									
25	---	---	---									
26	---	---	---									
27	---	---	---									
28	---	---	---									
29	---	---	---									
30	---	---	---									
31	---	---	---									
MONTH	125	104	113									
YEAR	154	56	101									

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	15.5	15.0	15.5	8.5	7.0	8.0	4.5	3.5	4.0	.0	.0	.0
2	16.0	14.5	15.5	8.5	8.0	8.0	3.5	2.5	3.5	.0	.0	.0
3	15.5	15.0	15.5	8.5	7.5	8.0	2.5	1.5	2.0	.0	.0	.0
4	15.5	14.5	15.0	8.0	7.5	7.5	2.0	1.0	1.5	.0	.0	.0
5	15.5	15.0	15.5	7.5	6.5	7.0	1.5	1.0	1.0	.0	.0	.0
6	15.5	14.5	15.0	6.5	6.0	6.5	1.5	1.0	1.5	.0	.0	.0
7	15.0	14.0	14.5	6.5	6.0	6.0	2.0	1.0	1.5	.0	.0	.0
8	14.5	13.5	14.0	6.5	6.0	6.5	2.0	1.0	1.5	.0	.0	.0
9	13.0	11.5	12.5	6.5	6.0	6.0	1.0	.0	.5	---	---	---
10	11.5	10.5	11.0	7.0	6.5	6.5	1.0	.0	.5	---	---	---
11	10.5	9.0	10.0	7.0	6.5	6.5	.5	.0	.5	---	---	---
12	9.5	9.0	9.5	7.0	7.0	7.0	.5	.0	.5	---	---	---
13	10.0	8.5	9.0	7.0	6.5	6.5	1.0	.5	1.0	---	---	---
14	9.0	8.0	8.5	6.5	6.0	6.5	1.0	.5	1.0	---	---	---
15	8.5	7.5	8.0	6.0	5.5	6.0	.5	.0	.5	---	---	---
16	9.0	8.0	8.5	5.5	5.0	5.5	.5	.0	.0	---	---	---
17	8.5	7.0	8.0	5.0	4.0	4.5	.0	.0	.0	---	---	---
18	9.5	8.5	9.0	5.5	4.5	5.0	.0	.0	.0	---	---	---
19	9.0	8.0	8.5	5.0	4.0	4.5	.0	.0	.0	---	---	---
20	9.5	8.5	9.0	4.5	4.0	4.5	.0	.0	.0	---	---	---
21	10.0	9.0	9.5	4.5	4.0	4.5	.0	.0	.0	---	---	---
22	11.0	9.5	10.0	5.0	4.5	4.5	.0	.0	.0	---	---	---
23	12.0	10.5	11.0	5.5	5.0	5.0	.0	.0	.0	---	---	---
24	12.0	12.0	12.0	6.0	5.5	6.0	.0	.0	.0	---	---	---
25	12.0	11.5	12.0	7.0	6.0	6.5	.0	.0	.0	---	---	---
26	11.5	10.0	11.0	7.5	6.5	7.0	.0	.0	.0	---	---	---
27	10.0	9.0	9.5	8.0	6.5	7.5	.0	.0	.0	---	---	---
28	9.0	8.0	8.5	6.5	6.0	6.5	.0	.0	.0	---	---	---
29	8.5	7.5	8.0	6.0	5.5	6.0	.0	.0	.0	---	---	---
30	8.0	7.0	7.5	5.5	4.5	5.0	.0	.0	.0	---	---	---
31	8.0	7.0	7.5	---	---	---	.0	.0	.0	---	---	---
MONTH	16.0	7.0	11.0	8.5	4.0	6.0	4.5	.0	.5	.0	.0	.0

01155050 CONNECTICUT RIVER AT WALPOLE, NH--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980--Continued

DAY	MAX	MIN FEBRUARY	MEAN	MAX	MIN MARCH	MEAN	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1							---	---	---	---	---	---
2							---	---	---	---	---	---
3							---	---	---	---	---	---
4							---	---	---	---	---	---
5							---	---	---	---	---	---
6							---	---	---	---	---	---
7							---	---	---	---	---	---
8							---	---	---	---	---	---
9							5.0	5.0	5.0	---	---	---
10							5.0	4.0	4.5	---	---	---
11							5.0	4.0	4.5	---	---	---
12							4.5	4.0	4.5	---	---	---
13							5.0	4.5	4.5	---	---	---
14							5.0	4.5	5.0	13.0	12.5	12.5
15							6.0	5.0	5.5	---	---	---
16							5.5	4.5	5.0	---	---	---
17							5.0	4.5	5.0	14.5	12.5	13.5
18							5.5	4.5	5.0	14.5	14.0	14.0
19							6.0	4.5	5.5	15.0	14.0	14.5
20							6.5	5.0	6.0	---	---	---
21							7.5	6.5	7.5	---	---	---
22							7.5	4.0	7.0	---	---	---
23							8.0	7.0	7.5	---	---	---
24							8.0	2.0	6.0	---	---	---
25							8.5	2.0	3.0	---	---	---
26							---	---	---	---	---	---
27							---	---	---	---	---	---
28							---	---	---	---	---	---
29							---	---	---	---	---	---
30							10.5	9.5	10.5	---	---	---
31							---	---	---	---	---	---
MONTH							10.5	2.0	5.5	15.0	12.5	13.5

DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	---	---	---	23.0	21.0	22.0						
2	18.5	18.0	18.5	22.0	21.5	21.5						
3	18.5	17.5	18.0	23.0	21.0	22.0						
4	18.5	16.5	17.5	23.5	21.0	22.0						
5	17.5	16.5	17.0	23.0	22.0	22.5						
6	---	---	---	24.0	21.0	22.5						
7	---	---	---	23.5	19.5	22.0						
8	19.0	16.0	17.0	22.0	18.5	21.0						
9	---	---	---	23.0	21.0	22.0						
10	---	---	---	23.5	21.5	22.5						
11	---	---	---	23.5	22.0	23.0						
12	---	---	---	23.5	21.5	22.5						
13	---	---	---	24.0	21.5	23.0						
14	---	---	---	23.5	22.0	23.0						
15	---	---	---	23.0	22.5	23.0						
16	18.5	18.0	18.5	---	---	---						
17	19.5	17.0	18.5	---	---	---						
18	20.0	17.0	19.0	---	---	---						
19	21.0	14.5	19.5	---	---	---						
20	20.0	19.0	19.5	---	---	---						
21	20.0	18.5	19.0	---	---	---						
22	22.5	18.5	20.5	---	---	---						
23	21.0	18.5	20.0	---	---	---						
24	21.5	19.5	20.5	---	---	---						
25	21.5	20.5	21.0	---	---	---						
26	22.0	21.0	21.5	---	---	---						
27	23.5	21.5	22.5	---	---	---						
28	25.0	22.0	23.5	---	---	---						
29	23.0	21.5	22.5	---	---	---						
30	22.0	20.5	21.5	---	---	---						
31	---	---	---	---	---	---						
MONTH	25.0	14.5	20.0	24.0	18.5	22.5						
YEAR	25.0	.0	9.0									

01155500 WEST RIVER AT JAMAICA, VT

LOCATION.--Lat 43°06'32", long 72°46'33", Windham County, Hydrologic Unit 01080107, on left bank 0.2 mi (0.3 km) upstream from highway bridge at Jamaica, 0.4 mi (0.6 km) upstream from Ball Mountain Brook, and 2.8 mi (4.5 km) downstream from Ball Mountain Dam, and at mile 26.2 (42.2 km).

DRAINAGE AREA.--179 mi^2 (464 km^2).

PERIOD OF RECORD.--Discharge: October 1946 to current year.
Water-quality records: Water year 1954.

GAGE.--Water-stage recorder. Altitude of gage is 640 ft (195 m), from topographic map.

REMARKS.--Records good except those for winter period, which are poor. Flow regulated by Ball Mountain Reservoir since 1961 (Reservoirs in Connecticut River basin). Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--34 years, 367 ft^3/s (10.39 m^3/s), 27.84 in/yr (707 mm/yr), adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 29,500 ft^3/s (835 m^3/s) Dec. 31, 1948, gage height, 14.87 ft (4.532 m), from rating curve extended above 9,800 ft^3/s (280 m^3/s), verified by slope-area measurement of peak flow; minimum, 0.94 ft^3/s (0.027 m^3/s) Sept. 23-25, 1968; minimum daily, 0.94 ft^3/s (0.027 m^3/s) Sept. 23, 24, 1968. Maximum discharge since construction of Ball Mountain Dam in 1961, 5,080 ft^3/s (144 m^3/s) Mar. 17, 1977, gage height, 9.27 ft (2.825 m); maximum gage height, 10.43 ft (3.179 m) Mar. 9, 1979, ice jam.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,930 ft^3/s (83.0 m^3/s) Mar. 24, gage height, 8.05 ft (2.454 m); minimum discharge, 15 ft^3/s (0.42 m^3/s) Sept. 5; minimum daily, 25 ft^3/s (0.71 m^3/s) July 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	57	132	441	175	70	56	1280	204	72	40	35	34
2	214	133	339	162	37	56	1020	667	72	40	35	34
3	320	189	229	162	37	56	863	1600	74	40	35	35
4	681	395	216	115	37	56	1260	1060	173	34	34	34
5	840	638	227	90	37	56	1650	147	710	25	35	33
6	1010	670	259	90	37	56	1110	86	708	54	35	32
7	917	617	342	90	37	56	1030	435	586	72	35	32
8	291	541	414	90	37	56	1230	1010	535	72	34	32
9	343	312	218	90	37	65	1210	720	362	92	35	32
10	392	321	165	92	37	110	1360	420	150	109	34	32
11	382	543	187	92	37	290	2230	414	151	109	35	32
12	376	581	224	105	37	220	2530	283	152	109	35	32
13	401	522	244	170	37	130	2420	180	150	191	35	32
14	440	363	256	275	26	88	2310	286	150	62	35	33
15	450	326	230	235	30	96	1850	325	148	61	35	34
16	430	280	210	180	35	80	1580	322	150	37	34	32
17	405	228	225	180	37	80	1130	316	149	36	34	33
18	285	214	310	133	37	150	564	311	97	35	33	37
19	226	217	225	136	37	800	312	195	74	35	32	34
20	208	215	135	137	37	1200	247	246	74	34	33	34
21	200	209	105	114	37	1340	211	310	74	36	33	33
22	195	186	105	100	37	179	215	92	74	36	33	34
23	187	175	120	95	56	845	261	47	73	35	33	34
24	189	175	200	100	56	2130	338	84	73	35	32	33
25	198	175	350	90	56	2590	356	147	68	35	32	33
26	198	394	820	90	56	1430	353	146	65	35	32	46
27	195	1700	863	74	56	720	352	123	50	35	32	99
28	190	2210	521	74	56	668	418	86	39	35	32	115
29	184	730	390	74	56	905	308	86	40	35	32	113
30	150	468	320	80	---	1500	206	86	42	35	33	113
31	132	---	220	92	---	1680	---	80	---	34	37	---
TOTAL	10686	13859	9110	3782	1219	17744	30204	10514	5335	1673	1049	1316
MEAN	345	462	294	122	42.0	572	1007	339	178	54.0	33.8	43.9
MAX	1010	2210	863	275	70	2590	2530	1600	710	191	37	115
MIN	57	132	105	74	26	56	206	47	39	25	32	32
MEAN†	308	463	292	123	41	596	1047	308	176	55	32	58
CFSM†	1.72	2.59	1.63	.69	.23	3.33	5.85	1.72	.98	.31	.18	.32
IN†	1.98	2.88	1.88	.79	.25	3.84	6.53	1.99	1.10	.35	.21	.36

CAL YR 1979 TOTAL 173764 MEAN 476 MAX 4260 MIN 28 MEAN† 475 CFSM† 2.65 IN† 36.12
WTR YR 1980 TOTAL 106491 MEAN 291 MAX 2590 MIN 25 MEAN† 291 CFSM† 1.63 IN† 22.15

† Adjusted for change in contents in Ball Mountain Reservoir.

01156000 WEST RIVER AT NEWFANE, VT

LOCATION.--Lat 42°59'43", long 72°38'13", Windham County, Hydrologic Unit 01080107, on left bank 400 ft (100 m) downstream from highway bridge, 1.0 mi (1.6 km) northeast of Newfane, and at mile 12.7 (20.4 km).

DRAINAGE AREA.--308 mi^2 (798 km^2).

PERIOD OF RECORD.--Discharge: September 1919 to September 1923, October 1928 to current year.
Water-quality records: Water year 1954.
Water temperatures: October 1954 to September 1965.

REVISED RECORDS.--WSP 756: Drainage area. WSP 1231: 1922-23, 1929-31(M).

GAGE.--Water-stage recorder. Datum of gage is 384.21 ft (117.107 m) National Geodetic Vertical Datum of 1929. Prior to June 27, 1931, nonrecording gage at site 600 ft (200 m) upstream and June 27, 1931, to Aug. 21, 1972, water-stage recorder on right bank 600 ft (200 m) downstream from highway bridge at same datum.

REMARKS.--Records good except those for winter period, which are fair. Flow regulated since 1961 by Ball Mountain Reservoir and Townshend Reservoir 6.8 mi (10.9 km) upstream (Reservoirs in Connecticut River basin). Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--56 years, 630 ft^3/s (17.84 m^3/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 52,300 ft^3/s (1,480 m^3/s) Sept. 21, 1938, gage height, 22.81 ft (6.952 m), from floodmarks, from rating curve extended above 20,000 ft^3/s (570 m^3/s) on basis of contracted-opening measurement at gage height 19.3 ft (5.88 m) and slope-area measurements at gage heights 19.46 ft (5.931 m) and 22.81 ft (6.952 m); minimum, 7.6 ft^3/s (0.22 m^3/s) Aug. 24, 25, 26, 1962; minimum daily, 8.2 ft^3/s (0.23 m^3/s) Aug. 25, 1962. Maximum discharge since construction of Ball Mountain and Townshend Reservoirs in 1961, 10,300 ft^3/s (292 m^3/s) May 25, 1979, gage height, 10.07 ft (3.069 m).

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1869, that of Sept. 21, 1938. Flood of Nov. 3, 1927, reached a discharge of 45,000 ft^3/s (1,270 m^3/s), gage height, 23.0 ft (7.01 m), from floodmarks, at nonrecording-gage site, from rating curve extended above 20,000 ft^3/s (570 m^3/s) on basis of computation of peak flow over dam at West Dummerston, about 5 mi (8 km) downstream, adjusted for flow from intervening area.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,520 ft^3/s (128 m^3/s) Mar. 25, gage height, 7.83 ft (2.387 m); maximum gage height, 8.28 ft (2.524 m), Mar. 18 (ice jam); minimum, not determined; minimum daily, 45 ft^3/s (1.27 m^3/s) Aug. 13-15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	138	214	690	255	145	100	2000	683	149	89	58	60
2	581	214	617	290	135	100	1700	813	146	89	60	60
3	512	472	421	250	130	100	1400	2070	148	89	68	60
4	1200	728	386	200	130	100	1800	1500	249	89	68	59
5	1190	829	398	155	125	100	2500	472	800	88	68	58
6	1680	886	394	150	120	105	2100	344	814	84	99	55
7	1580	862	576	150	120	120	1700	586	670	84	130	54
8	679	732	598	150	115	145	1900	1340	664	84	100	54
9	670	509	475	150	115	175	1900	1240	510	84	80	54
10	765	592	318	155	115	220	2100	736	298	84	80	55
11	765	964	271	165	110	300	2900	683	225	84	80	55
12	767	901	338	240	110	275	3800	593	226	84	60	55
13	967	777	374	205	110	215	3700	422	226	84	45	56
14	970	624	375	275	110	185	3500	432	224	84	45	56
15	880	495	345	405	110	155	3200	465	218	84	45	58
16	790	460	329	327	105	145	2700	465	384	82	54	56
17	650	392	424	302	105	180	2000	465	338	68	60	57
18	500	357	447	285	105	500	1200	461	256	65	56	62
19	359	351	372	258	105	1500	600	598	179	64	56	60
20	341	342	341	250	105	1000	400	257	161	58	56	58
21	318	333	271	245	105	800	350	407	157	56	57	58
22	303	316	326	225	105	250	330	289	156	56	58	59
23	291	294	319	210	100	800	400	184	149	58	58	60
24	294	288	341	195	100	1300	500	169	142	58	56	58
25	319	287	912	185	100	4080	599	210	133	58	56	54
26	301	764	1440	175	100	2690	1140	217	128	58	56	54
27	290	4080	1400	165	100	1340	623	211	123	58	56	77
28	279	3380	1020	160	100	1370	726	175	100	58	56	116
29	276	1580	609	155	100	1770	1010	166	92	58	56	120
30	263	913	542	150	---	3000	865	164	89	58	59	120
31	214	---	457	150	---	2300	---	156	---	58	62	---
TOTAL	19132	23936	16126	6632	3235	25420	49643	16973	8154	2255	1998	1918
MEAN	617	798	520	214	112	820	1655	548	272	72.7	64.5	63.9
MAX	1680	4080	1440	405	145	4080	3800	2070	814	89	130	120
MIN	138	214	271	150	100	100	330	156	89	56	45	54

CAL YR 1979 TOTAL 311811 MEAN 854 MAX 7860 MIN 52
WTR YR 1980 TOTAL 175422 MEAN 479 MAX 4080 MIN 45

01157000 ASHUELOT RIVER NEAR GILSUM, NH

LOCATION.--Lat 43°02'21", long 72°16'14", Cheshire County, Hydrologic Unit 01080201, on right bank 50 ft (15 m) downstream from White Brook, 60 ft (18 m) upstream from stone-arch bridge just off Keene-Newport Road, 0.7 mi (1.1 km) downstream from Gilsum, and at mile 43.4 (69.8 km).

DRAINAGE AREA.--71.1 mi^2 (184.1 km^2).

PERIOD OF RECORD.--Discharge: August 1922 to September 1980 (discontinued).
Water-quality records: Water year 1955.

REVISED RECORDS.--WSP 661: Drainage area. WSP 781: 1934(M). WSP 1231: 1923-27(M), 1928, 1929-30(M), 1931, 1932(M).

GAGE.--Water-stage recorder. Datum of gage is 772.86 ft (235.568 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Oct. 1, 1964, datum was 1.00 ft (0.305 m) higher.

REMARKS.--Records fair except those for winter period and periods of no gage-height record, June 19 to July 29, which are poor. Some regulation by reservoir upstream. Prior to 1938, diurnal fluctuation caused by powerplant upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--58 years, 126 ft^3/s (3.568 m^3/s), 24.07 in/yr (611 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,220 ft^3/s (148 m^3/s) Sept. 21, 1938, gage height, 12.24 ft (3.731 m) in gage well, present datum, from rating curve extended above 2,000 ft^3/s (57 m^3/s) on basis of float measurements at gage heights 11.66 ft (3.554 m) and 11.72 ft (3.572 m) and slope-area measurement at gage height 12.24 ft (3.731 m), all at present datum; maximum gage height, 13.80 ft (4.206 m) present datum, Mar. 19, 1936; minimum discharge, about 1 ft^3/s (0.03 m^3/s) Oct. 6, 1922, July 10, 1923, Nov. 14, 1952.
Maximum discharge since at least 1859, that of Sept. 21, 1938.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,980 ft^3/s (56.1 m^3/s) Apr. 10, gage height, 8.38 ft (2.55 m); no other peak above base of 1,000 ft^3/s (28 m^3/s); maximum gage height, 8.51 ft (2.59 m) Mar. 18, ice jam; minimum discharge, 3.50 ft^3/s (0.099 m^3/s) Sept. 1, 7-9, 11-17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	138	83	164	115	33	25	394	221	31	80	5.3	4.2
2	427	82	141	109	31	24	319	216	28	68	8.5	4.6
3	404	187	123	98	30	24	280	185	30	56	7.7	6.1
4	746	308	112	84	30	24	319	150	45	45	8.1	7.4
5	559	247	105	78	29	24	423	119	44	39	8.1	5.1
6	441	201	104	70	28	24	364	105	36	31	7.5	4.6
7	329	174	150	65	28	25	287	115	33	25	7.5	4.3
8	258	152	163	62	27	27	252	139	33	28	6.8	4.2
9	241	135	128	60	26	70	245	152	33	32	6.4	4.0
10	276	153	119	59	26	115	1570	135	33	30	5.9	4.0
11	258	187	109	58	25	145	1480	115	31	28	6.2	4.0
12	245	187	104	115	24	190	825	103	29	26	8.3	3.9
13	305	174	102	105	24	170	523	95	28	24	8.5	3.9
14	283	169	96	90	24	125	385	93	25	23	7.7	3.9
15	243	168	84	83	23	85	394	87	26	21	7.5	3.9
16	208	153	90	78	23	68	407	78	95	19	6.8	4.2
17	180	137	128	76	22	85	329	72	67	18	6.4	4.0
18	156	128	119	73	22	250	256	65	43	17	5.8	4.8
19	137	119	95	69	22	380	216	69	39	15	5.5	4.6
20	125	111	90	65	23	320	185	72	36	14	5.5	4.5
21	118	104	83	60	23	400	171	69	33	13	5.0	4.2
22	112	98	86	55	25	450	161	62	30	12	5.1	4.2
23	105	96	88	50	25	500	148	54	27	12	5.0	4.0
24	108	93	90	47	26	390	135	47	24	13	4.8	4.0
25	109	95	197	45	26	350	127	44	22	12	4.6	3.9
26	103	115	290	43	26	325	121	45	21	11	4.3	4.6
27	96	237	245	40	25	298	118	39	19	11	4.2	6.2
28	89	256	204	38	25	285	112	36	18	10	4.3	5.5
29	89	227	171	37	25	327	137	33	30	9.6	4.2	4.7
30	88	192	145	35	---	473	195	32	50	7.5	4.1	4.5
31	85	---	128	34	---	476	---	31	---	6.2	4.0	---
TOTAL	7061	4768	4053	2096	746	6474	10878	2878	1039	756.3	189.6	136.0
MEAN	228	159	131	67.6	25.7	209	363	92.8	34.6	24.4	6.12	4.53
MAX	746	308	290	115	33	500	1570	221	95	80	8.5	7.4
MIN	85	82	83	34	22	24	112	31	18	6.2	4.0	3.9
CFSM	3.21	2.24	1.84	.95	.36	2.94	5.11	1.31	.49	.34	.09	.06
IN.	3.69	2.49	2.12	1.10	.39	3.39	5.69	1.51	.54	.40	.10	.07

CAL YR 1979 TOTAL 71899.0 MEAN 197 MAX 1700 MIN 15 CFSM 2.77 IN 37.62
WTR YR 1980 TOTAL 41074.9 MEAN 112 MAX 1570 MIN 3.9 CFSM 1.58 IN 21.49

01158000 ASHUELOT RIVER BELOW SURRY MOUNTAIN DAM, NEAR KEENE, NH

LOCATION.--Lat 42°59'40", long 72°18'40", Cheshire County, Hydrologic Unit 01080201, on right bank 600 ft (200 m) downstream from Surry Mountain Dam, 2.5 mi (4.0 km) upstream from Sturtevant Brook, 4.5 mi (7.2 km) north of Keene, and at mile 34.0 (54.7 km).

DRAINAGE AREA.--101 mi^2 (262 km^2).

PERIOD OF RECORD.--Discharge: September 1945 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 480.00 ft (146.304 m) Corps of Engineers datum.

REMARKS.--Records good. Flow regulated by Surry Mountain Lake (Reservoirs in Connecticut River basin). Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--35 years, 174 ft^3/s (4.928 m^3/s), 23.40 in/yr (594 mm/yr), adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,320 ft^3/s (37.4 m^3/s) Oct. 28, 1959, gage height, 9.60 ft (2.926 m); minimum daily, 0.4 ft^3/s (0.011 m^3/s) Sept. 17, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 945 ft^3/s (26.8 m^3/s) Mar. 26, Apr. 16, gage height, 8.46 ft (2.579 m); minimum daily, 7.8 ft^3/s (0.22 m^3/s) Aug. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	130	103	258	191	42	24	657	256	40	52	13	12
2	265	95	225	143	42	24	486	262	38	50	14	13
3	434	144	192	128	42	24	413	242	41	45	15	14
4	627	294	170	127	32	24	401	210	56	40	15	14
5	683	323	149	98	29	24	477	177	61	36	15	14
6	674	284	134	76	29	23	476	157	56	35	15	14
7	596	244	151	61	29	22	423	162	54	32	14	15
8	437	211	178	49	29	23	323	184	53	30	13	14
9	351	185	172	59	29	61	308	198	54	36	12	14
10	349	179	157	64	29	79	238	185	53	38	11	14
11	340	210	145	64	28	124	464	166	49	35	11	14
12	318	225	133	98	28	185	508	154	44	32	13	14
13	357	236	127	139	28	199	515	142	41	28	14	15
14	369	225	120	159	27	150	559	134	38	26	14	15
15	337	225	98	160	27	133	571	124	35	23	15	15
16	297	217	90	125	27	65	874	114	84	21	15	15
17	259	199	92	90	27	46	922	103	112	22	14	20
18	223	182	93	82	26	171	850	97	91	23	12	20
19	195	168	93	83	24	381	727	101	71	21	11	20
20	174	159	92	84	24	511	701	100	57	19	11	19
21	159	146	92	82	24	431	728	97	52	18	10	19
22	148	136	92	82	24	17	724	90	49	17	10	19
23	141	128	92	71	24	460	646	82	44	18	9.4	19
24	139	123	107	66	24	848	426	77	38	21	8.9	18
25	80	119	145	56	24	917	257	80	36	20	8.4	17
26	33	123	232	51	24	922	202	71	31	18	8.0	17
27	33	228	278	51	24	913	182	62	28	16	7.9	17
28	33	331	311	51	24	869	147	55	24	14	7.8	17
29	154	331	328	51	24	540	199	49	24	14	8.6	17
30	163	298	321	51	---	484	227	44	40	15	10	18
31	119	---	265	41	---	656	---	41	---	15	11	---
TOTAL	8617	6071	5132	2733	814	9350	14631	4016	1494	830	367.0	483
MEAN	278	202	166	88.2	28.1	302	488	130	49.8	26.8	11.8	16.1
MAX	683	331	328	191	42	922	922	262	112	52	15	20
MIN	33	95	90	41	24	17	147	41	24	14	7.8	12
MEAN†	287	207	169	83.8	30.1	316	469	124	50.3	25.0	10.7	12.0
CFSM†	2.84	2.05	1.67	.83	.30	3.13	4.64	1.23	.50	.25	.11	.12
IN†	3.28	2.29	1.93	.96	.32	3.61	5.19	1.41	.56	.29	.12	.13

CAL YR 1979 TOTAL 87744.0 MEAN 240 MAX 1120 MIN 11 MEAN† 241 CFSM† 2.39 IN† 32.35
WTR YR 1980 TOTAL 54538.0 MEAN 149 MAX 922 MIN 7.8 MEAN† 149 CFSM† 1.48 IN† 20.09

† Adjusted for change in contents in Surry Mountain Lake.

01158600 OTTER BROOK BELOW OTTER BROOK DAM, NEAR KEENE, NH

LOCATION.--Lat 42°56'45", long 72°14'14", Cheshire County, Hydrologic Unit 01080201, on right bank 450 ft (150 m) downstream from Otter Brook Dam, 2 mi (3 km) northeast of Keene, 2.4 mi (3.9 km) upstream from Minnewawa Brook, and 4.9 mi (7.9 km) upstream from mouth.

DRAINAGE AREA.--47.2 mi^2 (122.2 km^2).

PERIOD OF RECORD.--May 1958 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 658.65 ft (200.757 m) Corps of Engineers datum.

REMARKS.--Records good. Flow regulated by Otter Brook Lake (Reservoirs in Connecticut River basin). Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--22 years, 78.3 ft^3/s (2.217 m^3/s), 22.53 in/yr (572 mm/yr), adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 685 ft^3/s (19.4 m^3/s) Apr. 20, 1959, gage height, 8.59 ft (2.618 m); maximum gage height, 8.61 ft (2.624 m) Apr. 26, 1972, Oct 20, 1977; minimum discharge, 0.1 ft^3/s (0.003 m^3/s) Nov. 28, 1959; minimum daily, 0.3 ft^3/s (0.008 m^3/s) Sept. 27 to Oct. 2, Oct. 9, 10, 12-20, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 640 ft^3/s (18.1 m^3/s) Mar. 24, gage height, 8.55 ft (2.606 m); minimum, not determined; minimum daily, 1.8 ft^3/s (0.051 m^3/s) Sept. 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	67	42	82	80	21	13	270	98	19	29	4.4	5.2
2	314	41	75	80	13	13	166	108	18	23	5.1	4.1
3	265	101	67	60	14	13	159	110	21	21	4.7	12
4	418	162	63	35	14	13	161	115	29	18	4.4	9.8
5	481	120	60	30	14	13	200	154	30	15	3.7	6.6
6	301	99	57	27	14	13	210	112	29	16	3.4	5.5
7	174	86	69	25	14	13	208	82	27	14	3.5	4.5
8	146	79	80	24	14	14	175	94	27	9.0	3.1	3.5
9	154	73	71	26	15	46	130	99	27	12	2.8	2.8
10	190	81	64	30	15	49	142	86	26	14	2.4	2.6
11	161	102	62	30	14	74	337	80	24	13	4.0	2.3
12	152	99	49	61	16	77	369	78	22	12	6.1	2.0
13	212	96	55	68	17	77	369	67	20	11	5.5	1.9
14	174	91	52	69	15	77	366	39	19	10	4.4	1.8
15	136	88	45	69	13	77	464	44	17	9.4	6.9	2.0
16	117	81	45	68	14	72	560	51	23	8.6	6.0	2.0
17	103	73	45	69	15	54	516	47	46	8.0	4.6	2.0
18	95	69	48	54	14	112	298	45	42	8.4	3.7	2.5
19	90	65	63	45	13	240	154	45	29	8.3	3.3	3.0
20	84	62	70	45	13	317	134	45	21	7.7	3.0	2.8
21	78	60	70	37	14	189	121	45	21	7.7	2.9	2.5
22	66	57	63	25	15	14	110	45	20	6.8	2.8	2.1
23	60	57	59	27	16	267	100	38	18	8.0	2.9	2.0
24	59	56	66	27	15	584	94	34	16	8.1	2.7	2.0
25	34	56	79	27	15	594	89	37	14	6.8	2.4	5.0
26	9.1	66	130	27	14	556	88	34	12	5.5	2.5	6.0
27	9.1	136	197	27	14	509	83	31	11	4.8	2.4	6.0
28	9.1	129	195	27	13	283	74	28	9.1	4.5	2.3	5.6
29	146	107	150	28	13	163	92	25	9.2	4.4	2.3	5.2
30	70	91	110	27	---	255	105	23	27	4.7	2.3	5.0
31	47	---	80	24	---	273	---	21	---	4.4	4.1	---
TOTAL	4421.3	2525	2421	1298	421	5064	6344	1960	673.3	333.1	114.6	120.3
MEAN	143	84.2	78.1	41.9	14.5	163	211	63.2	22.4	10.7	3.70	4.01
MAX	481	162	197	80	21	594	560	154	46	29	6.9	12
MIN	9.1	41	45	24	13	13	74	21	9.1	4.4	2.3	1.8
MEAN†	143	84.2	78.2	41.8	14.5	164	211	62.9	22.8	10.7	3.69	3.99
CFSM†	3.02	1.78	1.66	.89	.31	3.47	4.47	1.33	.48	.23	.08	.08
IN†	3.48	1.99	1.91	1.02	.33	4.00	4.99	1.54	.54	.26	.09	.09

CAL YR 1979 TOTAL 43713.4 MEAN 120 MAX 583 MIN 6.2 MEAN† 119.8 CFSM† 2.54 IN† 34.45
WTR YR 1980 TOTAL 25695.6 MEAN 70.2 MAX 594 MIN 1.8 MEAN† 70.2 CFSM† 1.49 IN† 20.25

† Adjusted for change in contents in Otter Brook Lake.

01161000 ASHUELOT RIVER AT HINSDALE, NH

LOCATION.--Lat 42°47'07", long 72°29'12", Cheshire County, Hydrologic Unit 01080201, on left bank 40 ft (12 m) upstream from highway bridge at Hinsdale, 0.2 mi (0.3 km) downstream from dam, and 1.2 mi (1.9 km) upstream from mouth.

DRAINAGE AREA.--420 mi^2 (1,088 km^2).

PERIOD OF RECORD.--Discharge: March 1907 to December 1911, July 1914 to current year.
Water-quality records: Water years 1953, 1958, 1968.

REVISED RECORDS.--WSP 661: Drainage area. WSP 781: 1907-10, 1914-34. WSP 1301: 1915(M), 1917-19(M), 1921-33(M). WSP 1701: 1920.

GAGE.--Water-stage recorder. Datum of gage is 201.32 ft (61.362 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Sept. 29, 1933, nonrecording gage on highway bridge at same datum.

REMARKS.--Records good except those for winter period, which are fair. Flow regulated by Surry Mountain Lake 33 mi (53 km) upstream since 1942 and by Otter Brook Lake 29 mi (47 km) upstream on Otter Brook since 1958 (Reservoirs in Connecticut River basin). Occasional diurnal fluctuation at low flow by mills upstream; greater regulation prior to 1952. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--70 years, 668 ft^3/s (18.92 m^3/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,600 ft^3/s (470 m^3/s) Mar. 19, 1936, by computation of peak flow over dam; maximum gage height, 20.2 ft (6.16 m) Mar. 19, 1936, from floodmarks, backwater from Connecticut River; minimum discharge, 10 ft^3/s (0.28 m^3/s) Sept. 9, 1953; minimum daily, 12 ft^3/s (0.34 m^3/s) Sept. 15, 1929.

Maximum discharge since at least 1859, that of Mar. 19, 1936.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,100 ft^3/s (116 m^3/s) Apr. 10, gage height, 7.05 ft (2.149 m); minimum, 35 ft^3/s (0.991 m^3/s) Sept. 22-23; minimum daily, 49 ft^3/s (1.39 m^3/s) Sept. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	426	440	916	795	160	150	1870	986	168	672	83	85
2	1080	400	810	714	150	140	1750	924	168	483	77	90
3	1500	600	728	651	140	135	1490	882	173	346	75	130
4	2060	900	665	521	135	130	1470	826	221	264	75	110
5	2340	1200	629	498	130	125	1690	779	221	205	73	90
6	2140	950	602	400	125	120	1680	764	209	196	70	80
7	1770	800	643	387	120	110	1510	742	205	179	69	70
8	1430	700	714	357	115	200	1370	810	231	158	66	65
9	1200	600	686	334	110	650	1230	857	218	199	63	61
10	1300	840	629	329	110	665	3270	810	209	221	58	55
11	1250	950	595	329	105	1060	3960	721	199	193	61	53
12	1180	1000	561	578	105	1160	3240	672	184	179	90	51
13	1360	900	529	810	105	907	2540	651	171	160	116	49
14	1430	882	529	699	100	735	2140	636	153	138	112	51
15	1250	865	461	643	100	578	2130	569	138	129	110	52
16	1100	818	433	602	100	529	2410	521	218	114	106	65
17	968	764	569	545	100	420	2530	454	309	108	91	72
18	882	699	595	483	100	1600	2400	413	279	104	80	91
19	795	651	505	420	100	2370	2010	454	228	101	73	93
20	714	615	498	390	100	1980	1720	433	193	97	70	88
21	665	586	454	350	100	1920	1580	394	184	88	68	83
22	615	545	461	320	100	2910	1550	369	182	83	66	76
23	561	521	498	290	100	2440	1470	318	165	81	64	68
24	561	490	521	270	100	2220	1350	283	148	86	62	66
25	602	498	898	250	100	2440	1090	267	134	83	55	65
26	200	595	1470	230	110	2500	898	260	125	80	51	81
27	100	1090	1430	210	115	2380	826	242	116	77	50	114
28	150	1360	1240	200	120	2240	810	218	108	72	50	101
29	500	1220	1090	190	125	2020	865	199	127	72	54	86
30	750	1060	1000	180	---	1830	1040	184	505	81	61	78
31	510	---	933	170	---	1880	---	176	---	88	75	---
TOTAL	31389	23539	22292	13145	3280	38544	53889	16814	5889	5137	2274	2319
MEAN	1013	785	719	424	113	1243	1796	542	196	166	73.4	77.3
MAX	2340	1360	1470	810	160	2910	3960	986	505	672	116	130
MIN	100	400	433	170	100	110	810	176	108	72	50	49

CAL YR 1979 TOTAL 362426 MEAN 993 MAX 5600 MIN 85
WTR YR 1980 TOTAL 218511 MEAN 597 MAX 3960 MIN 49

RESERVOIRS IN CONNECTICUT RIVER BASIN

01127850; 01128000. FIRST CONNECTICUT AND SECOND CONNECTICUT LAKES on Connecticut River are operated as a unit for storage of water for power and are used for recreation. The downstream order and usable capacity of each are as follows: Second Lake, 12 mi (19 km) northeast of Pittsburg, NH, 506,000,000 ft^3 (14,300,000 m^3); First Lake, 5.6 mi (9.0 km) northeast of Pittsburg, NH, 3,330,000,000 ft^3 (94,300,000 m^3). Records furnished by New England Power Co.

01129000. LAKE FRANCIS on Connecticut River at Pittsburg, NH, completed in March 1940, used for storage of water for power and for recreation, has usable capacity of 4,326,000,000 ft^3 (122,500,000 m^3). Records furnished by New Hampshire Water Resources Board.

01132000; 01132500. MOORE AND COMERFORD RESERVOIRS on Connecticut River are operated as a unit for storage of water for hydroelectric power development and are used for recreation. The downstream order and usable capacity of each are as follows: Moore Reservoir, 4.5 mi (7.2 km) northwest of Littleton, NH, filled in April 1956, 4,970,000,000 ft^3 (141,000,000 m^3); Comerford Reservoir, 5 mi (8 km) northeast of Monroe, NH, completed in 1930, 1,279,000,000 ft^3 (36,220,000 m^3). Records furnished by New England Power Co.

01141000. UNION VILLAGE RESERVOIR on Ompompanoosuc River, 0.3 mi (0.5 km) north of Union Village, VT, completed in 1949 for flood control, has usable capacity of 1,660,000,000 ft^3 (47,000,000 m^3). Records furnished by Corps of Engineers.

01148000; 01150000. LAKES AND PONDS IN MASCOMA RIVER BASIN are operated as a unit for storage of water for power and are used for recreation. The reservoirs and usable capacity of each are as follows: 01148000 Goose Pond, 5.2 mi (8.4 km) northeast of Mascoma, NH, 509,000,000 ft^3 (14,400,000 m^3); Grafton Pond, 8.5 mi (13.7 km) southeast of Mascoma, 144,000,000 ft^3 (4,080,000 m^3); Crystal Lake, 5.8 mi (9.3 km) southeast of Mascoma, 75,000,000 ft^3 (2,100,000 m^3); 01150000 Mascoma Lake at Mascoma, 337,000,000 ft^3 (9,540,000 m^3); total usable capacity of the four reservoirs, 1,060,000,000 ft^3 (30,000,000 m^3). Records furnished by New Hampshire Water Resources Board.

01151400. NORTH HARTLAND RESERVOIR on Ottauquechee River at North Hartland, VT, completed in 1961, used for flood control and recreation, has usable capacity of 3,110,000,000 ft^3 (88,100,000 m^3). Records furnished by Corps of Engineers.

01152000. SUNAPEE LAKE on Sugar River at Sunapee, NH, used for recreation and storage of water for power, has usable capacity of 862,000,000 ft^3 (24,400,000 m^3). Records furnished by New Hampshire Water Resources Board.

01152900. NORTH SPRINGFIELD RESERVOIR on Black River at North Springfield, VT, completed in 1960, used for flood control and recreation, has usable capacity of 2,230,000,000 ft^3 (63,200,000 m^3). Records furnished by Corps of Engineers.

01155400. BALL MOUNTAIN RESERVOIR on West River, 2 mi (3.2 km) north of Jamaica, VT, completed in 1961, used for flood control and recreation, has usable capacity of 2,380,000,000 ft^3 (67,400,000 m^3). Records furnished by Corps of Engineers.

01155900. TOWNSHEND RESERVOIR on West River, 1.8 mi (2.9 km) northwest of Townshend, VT, completed in 1961, used for flood control and recreation, has usable capacity of 1,460,000,000 ft^3 (41,300,000 m^3). Records furnished by Corps of Engineers.

01157500. SURRY MOUNTAIN LAKE on Ashuelot River, 4.5 mi (7.2 km) north of Keene, NH, completed in 1942, used for flood control and recreation, has usable capacity of 1,420,000,000 ft^3 (40,200,000 m^3). Records furnished by Corps of Engineers.

01158550. OTTER BROOK LAKE on Otter Brook, 2.5 mi (4.0 km) northeast of Keene, NH, completed in 1958, used for flood control and recreation, has usable capacity of 798,000,000 ft^3 (22,600,000 m^3). Records furnished by Corps of Engineers.

MONTHEND USABLE CONTENTS, IN MILLIONS OF CUBIC FEET, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

Date	First and Second Connecticut Lakes	Lake Francis	Moore and Comerford Reservoirs	Union Village Reservoir	Lakes and Ponds in Mascoma River basin	North Hartland Reservoir
Sept. 30, 1979	2768.7	3022.7	5499.7	1.6	895.1	122.0
Oct. 31	2438.9	3207.8	5661.3	1.8	776.9	129.0
Nov. 30	2628.0	3399.6	6145.1	23.3	623.3	106.4
Dec. 31	2447.3	3124.1	6080.3	14.3	634.0	83.8
Jan. 31, 1980	1918.0	2383.3	5220.4	17.9	572.0	76.9
Feb. 29	1560.1	2005.3	3175.3	16.1	499.2	78.6
Mar. 31	1485.0	1864.9	3127.0	11.3	708.3	104.6
Apr. 30	2743.6	3090.6	5594.9	6.2	988.8	105.5
May 31	3187.6	3613.9	5646.1	1.6	1003.3	124.0
June 30	3386.6	3793.6	5335.2	1.4	1002.5	124.0
July 31	3298.7	3723.5	5677.6	1.4	957.4	123.0
Aug. 31	3111.5	3498.4	5268.5	1.4	891.0	122.0
Sept. 30	3174.6	3455.5	5769.0	1.4	855.0	122.0

	Sunapee Lake	North Springfield Reservoir	Ball Mountain Reservoir	Townshend Reservoir	Surry Mountain Lake	Otter Brook Lake
Sept. 30, 1979	422	23.3	114.9	35.5	43.6	36.2
Oct. 31	406	23.3	15.5	37.2	69.1	35.8
Nov. 30	405	30.5	17.3	42.9	81.7	37.9
Dec. 31	388	26.2	11.7	38.0	91.0	39.6
Jan. 31, 1980	325	23.3	13.3	36.6	79.2	37.2
Feb. 29	248	23.3	11.5	35.8	84.4	37.6
Mar. 31	422	51.5	75.4	55.2	123.9	45.8
Apr. 30	588	31.3	179.4	39.7	76.7	36.8
May 31	607	24.0	96.5	36.6	60.9	26.4
June 30	614	24.0	91.7	35.5	62.1	37.2
July 31	537	22.5	94.2	34.8	57.4	36.8
Aug. 31	437	22.5	89.3	34.8	54.3	36.5
Sept. 30	354	23.3	124.6	35.2	43.6	35.8

01329000 BATTEN KILL AT ARLINGTON, VT

LOCATION.--Lat 43°04'38", long 73°09'26", Bennington County, Hydrologic Unit 02020003, on left bank 5 ft (1.5 m) upstream from bridge on Highway 313 at Arlington and 0.9 mi (1.4 km) downstream from Warm Brook.

DRAINAGE AREA.--152 mi^2 (394 km^2).

PERIOD OF RECORD.--October 1928 to current year.

REVISED RECORDS.--WSP 756: Drainage area. WSP 851: 1936 (maximum gage height). WSP 1302: 1929-34(M).

GAGE.--Water-stage recorder. Datum of gage is 596.68 ft (181.868 m), National Geodetic Vertical Datum of 1929. Prior to Nov. 18, 1941, nonrecording gage at downstream side of bridge at same datum.

REMARKS.--Records good except those for winter period, which are fair. No gage-height record Dec. 23 to Jan. 22. Prior to 1949, diurnal fluctuation at low flow caused by mill upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--52 years, 340 ft^3/s (9.629 m^3/s), 30.38 in/yr (772 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,100 ft^3/s (314 m^3/s) Mar. 18, 1936, gage height, 11.3 ft (3.44 m), from floodmarks, present site, from rating curve extended above 6,100 ft^3/s (170 m^3/s) on basis of slope-area measurement at gage height 10.8 ft (3.29 m) and computation of peak flow over dam; minimum, 37 ft^3/s (1.05 m^3/s) Sept. 25, 1964.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,200 ft^3/s (62 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar. 22	1000	2310	65.4	7.87	2.399	Apr. 10	2130	*2380	67.4	7.93	2.417

Minimum discharge, 53 ft^3/s (1.50 m^3/s) Aug. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	175	148	303	170	96	76	582	376	113	159	80	151
2	376	153	292	170	93	76	555	343	126	121	380	119
3	281	668	252	160	90	76	518	319	170	117	161	128
4	638	570	244	130	88	76	710	296	388	98	128	126
5	388	347	237	140	86	81	940	270	331	88	136	100
6	614	277	235	120	84	123	662	259	224	164	464	88
7	460	252	330	125	82	109	613	355	270	126	234	77
8	319	248	279	135	80	250	682	435	331	115	148	70
9	343	231	216	125	79	470	760	351	372	208	117	66
10	395	624	214	115	78	272	2110	292	277	136	102	64
11	300	629	210	130	78	246	1970	255	224	104	92	61
12	300	403	213	260	77	173	1210	252	193	104	100	58
13	500	323	254	160	77	133	1130	238	167	94	102	57
14	376	300	224	165	78	132	954	281	148	81	96	69
15	285	281	194	160	78	123	900	259	138	74	115	106
16	248	259	195	140	78	111	866	231	359	74	115	108
17	234	234	314	130	78	134	619	221	221	86	98	88
18	221	228	210	130	78	1570	527	238	161	92	86	288
19	202	224	150	130	78	1470	464	292	138	76	81	228
20	190	215	155	125	78	723	460	248	128	70	84	141
21	187	208	160	110	78	773	473	218	126	81	86	108
22	178	200	181	100	77	2140	443	208	117	100	83	94
23	170	195	190	131	78	1280	391	190	106	88	79	88
24	202	189	210	115	77	782	376	175	98	79	74	81
25	221	247	500	100	77	663	376	164	92	70	70	74
26	187	538	410	115	77	543	363	148	86	66	67	220
27	175	1600	300	117	76	463	347	141	81	64	63	198
28	172	848	240	111	77	435	359	133	79	64	61	126
29	167	470	220	110	77	500	423	128	83	61	61	103
30	167	360	210	105	---	904	435	124	190	67	61	92
31	153	---	190	100	---	782	---	119	---	60	124	---
TOTAL	8824	11469	7532	4134	2328	15689	21218	7559	5537	2987	3748	3377
MEAN	285	382	243	133	80.3	506	707	244	185	96.4	121	113
MAX	638	1600	500	260	96	2140	2110	435	388	208	464	288
MIN	153	148	150	100	76	76	347	119	79	60	61	57
CFSM	1.88	2.51	1.60	.88	.53	3.33	4.65	1.61	1.22	.63	.80	.74
IN.	2.16	2.81	1.84	1.01	.57	3.84	5.19	1.85	1.36	.73	.92	.83

CAL YR 1979 TOTAL 143238 MEAN 392 MAX 2300 MIN 66 CFSM 2.58 IN 35.06
WTR YR 1980 TOTAL 94402 MEAN 258 MAX 2140 MIN 57 CFSM 1.70 IN 23.10

01334000 WALLOOMSAC RIVER NEAR NORTH BENNINGTON, VT

LOCATION.--Lat 42°54'47", long 73°15'25", Bennington County, Hydrologic Unit 02020003, on left bank 0.6 mi (1.0 km) downstream from Paran Creek and 1.4 mi (2.3 km) south of North Bennington.

DRAINAGE AREA.--111 mi^2 (287 km^2).

PERIOD OF RECORD.--Discharge: June 1931 to current year.
Water-quality records: Water years 1953-54.

REVISED RECORDS.--WSP 781: 1933(M).

GAGE.--Water-stage recorder. Altitude of gage is 525 ft (160 m), from topographic map.

REMARKS.--Records good except those for winter period and periods of no gage-height record, Oct. 4-22, Mar. 22, Apr. 1-17, which are fair. Occasional diurnal fluctuation at low flow caused by mills upstream; diurnal fluctuation greater prior to 1960. Diversion upstream for municipal supply of Bennington and North Bennington since 1961. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--49 years, 222 ft^3/s (6.287 m^3/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,450 ft^3/s (239 m^3/s) Sept. 21, 1938, gage height, 12.04 ft (3.670 m), from rating curve extended above 2,800 ft^3/s (79 m^3/s) on basis of contracted-opening measurements at gage heights 10.13 ft (3.088 m), 10.49 ft (3.197 m), 11.50 ft (3.505 m), and 12.04 ft (3.670 m) and slope-area measurement and computation of flow over dam at gage height 12.04 ft (3.670 m); minimum, 4 ft^3/s (0.1 m^3/s) Sept. 27, 1932; minimum daily, 21 ft^3/s (0.59 m^3/s) Sept. 22, 23, 1964, July 12, 1965.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft^3/s (57 m^3/s) and maximum (*):

		Discharge		Gage height				Discharge		Gage height	
Date	Time	(ft^3/s)	(m^3/s)	(ft)	(m)	Date	Time	(ft^3/s)	(m^3/s)	(ft)	(m)
Nov. 27	0130	2800	79.3	6.65	2.027	Apr. 10	--	*4020	114	a8.06	2.457
Mar. 22	--	3900	110	--	--						

a From peak-stage indicator.

Minimum discharge, 38 ft^3/s (1.08 m^3/s) Feb. 27; minimum daily, 46 ft^3/s (1.30 m^3/s) Mar. 3, 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	183	105	251	124	64	49	360	203	74	173	138	90
2	780	107	226	124	62	48	340	189	69	112	340	155
3	373	577	196	115	60	46	340	173	92	102	138	296
4	1000	382	186	90	59	46	500	158	110	81	122	120
5	450	247	179	97	58	49	680	146	83	77	88	96
6	650	206	175	76	57	66	420	155	70	146	108	90
7	500	194	218	88	56	65	400	233	102	90	92	77
8	320	212	188	96	55	404	450	226	110	106	76	69
9	340	186	154	87	54	404	550	186	98	164	72	62
10	400	311	150	78	53	184	2100	167	102	96	64	59
11	280	355	146	90	52	184	1200	158	86	81	69	56
12	250	253	149	180	51	115	800	164	85	77	112	54
13	380	218	164	115	51	91	660	167	74	70	86	53
14	300	220	146	118	50	82	580	189	67	62	79	64
15	230	210	132	114	50	77	520	164	74	59	240	83
16	200	191	136	101	52	70	500	143	304	56	110	65
17	180	174	240	93	54	130	400	130	130	85	90	60
18	165	170	155	93	55	787	356	146	96	79	77	312
19	150	162	120	93	55	418	320	186	83	60	70	130
20	140	148	120	91	55	280	308	155	79	56	72	92
21	130	140	115	76	54	629	300	135	85	56	69	79
22	125	128	134	71	53	1950	270	127	79	59	65	79
23	124	135	139	86	54	697	240	115	70	102	62	74
24	153	136	162	66	54	450	223	106	64	77	57	65
25	149	204	356	72	54	377	213	98	60	60	54	62
26	130	494	310	75	52	328	206	94	56	54	53	104
27	121	1390	211	74	50	281	199	92	56	53	50	88
28	117	518	173	69	49	300	199	83	54	48	50	77
29	119	362	161	68	49	415	244	79	86	48	50	69
30	115	292	156	66	---	681	233	76	316	51	50	64
31	109	---	135	66	---	490	---	70	---	47	96	---
TOTAL	8663	8427	5483	2852	1572	10193	14111	4513	2914	2487	2899	2844
MEAN	279	281	177	92.0	54.2	329	470	146	97.1	80.2	93.5	94.8
MAX	1000	1390	356	180	64	1950	2100	233	316	173	340	312
MIN	109	105	115	66	49	46	199	70	54	47	50	53

CAL YR 1979 TOTAL 103691 MEAN 284 MAX 2260 MIN 48
WTR YR 1980 TOTAL 66958 MEAN 183 MAX 2100 MIN 46

04280000 POULTNEY RIVER BELOW FAIR HAVEN, VT

LOCATION.--Lat 43°37'40", long 73°18'50", Rutland County, Hydrologic Unit 02010001, on right bank 0.3 mi (0.5 km) downstream from Carver Falls, 1.9 mi (3.1 km) upstream from Hubbardton River, and 3.2 mi (5.1 km) northwest of Fair Haven.

DRAINAGE AREA.--187 mi^2 (484 km^2).

PERIOD OF RECORD.--Discharge: October 1928 to current year.
Water-quality records: Water year 1954.

REVISED RECORDS.--WSP 1114: 1929(M), 1932-35.

GAGE.--Water-stage recorder. Altitude of gage is 105 ft (32 m), from topographic map.

REMARKS.--Records fair except those for winter period and period of no gage-height record, Nov. 3 to Dec. 11, Dec. 13 to Feb. 20, which are poor. Flow regulated by powerplant upstream and by Lake Bomoseen. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--52 years, 249 ft^3/s (7.052 m^3/s), 18.08 in/yr (459 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,800 ft^3/s (419 m^3/s) July 20, 1945, gage height, 24.36 ft (7.425 m), from high-water mark in well, from rating curve extended above 2,600 ft^3/s (74 m^3/s) on basis of computations of flow over dam at gage heights 16.10 ft (4.907 m), 21.40 ft (6.523 m), and 24.36 ft (7.425 m); minimum daily, 2.1 ft^3/s (0.059 m^3/s) Aug. 8, 1965, Sept. 13, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,600 ft^3/s (74 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar. 18	1700	*3940	112	*13.83	4.215						

Minimum daily discharge, 6.0 ft^3/s (0.17 m^3/s) July 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	54	166	140	58	32	26	700	215	79	38	23	112
2	59	165	125	56	31	26	640	217	72	32	45	81
3	54	280	115	52	30	26	600	207	113	29	95	146
4	90	260	110	43	29	27	669	182	463	6.9	110	126
5	95	170	105	45	28	30	957	161	349	12	45	103
6	139	130	100	41	28	40	784	143	252	18	90	81
7	155	115	140	38	27	35	682	393	114	46	140	56
8	124	105	120	43	27	100	642	486	131	29	160	78
9	111	100	96	41	26	430	629	422	137	34	155	54
10	124	270	88	38	26	400	796	394	108	35	160	51
11	121	280	74	50	25	430	969	364	82	28	70	42
12	113	180	78	82	25	300	809	335	70	6.7	32	49
13	182	150	82	70	25	150	793	229	69	44	42	30
14	176	130	72	54	26	120	715	253	38	6.9	13	41
15	151	120	64	51	26	105	813	192	55	34	60	50
16	130	110	84	48	26	110	858	166	100	26	31	47
17	122	105	100	45	26	110	738	138	66	6.4	68	30
18	113	100	64	43	26	2500	654	128	46	41	45	50
19	104	96	50	42	27	1800	576	156	50	6.7	41	72
20	97	94	52	40	30	900	457	158	46	6.0	47	31
21	85	90	56	38	28	1000	427	128	25	20	43	21
22	87	88	60	34	26	1900	389	121	45	50	50	67
23	80	84	64	42	26	1400	358	104	64	84	17	16
24	85	82	100	37	26	940	331	102	49	58	50	53
25	137	120	160	34	26	800	313	79	40	120	35	16
26	184	350	130	37	25	680	280	96	37	210	15	123
27	188	680	100	38	25	560	221	82	33	27	34	181
28	182	400	82	37	25	500	226	64	6.7	35	33	95
29	180	220	72	36	25	600	231	57	16	17	31	83
30	174	160	66	35	---	1050	227	62	50	12	13	58
31	168	---	62	33	---	900	---	49	---	14	50	---
TOTAL	3864	5400	2811	1381	778	17995	17484	5883	2805.7	1132.6	1843	2043
MEAN	125	180	90.7	44.5	26.8	580	583	190	93.5	36.5	59.5	68.1
MAX	188	680	160	82	32	2500	969	486	463	210	160	181
MIN	54	82	50	33	25	26	221	49	6.7	6.0	13	16
CFSM	.67	.96	.49	.24	.14	3.10	3.12	1.02	.50	.20	.32	.36
IN.	.77	1.07	.56	.27	.15	3.58	3.48	1.17	.56	.23	.37	.41

CAL YR 1979 TOTAL 114917.1 MEAN 315 MAX 3000 MIN 6.6 CFSM 1.68 IN 22.86
WTR YR 1980 TOTAL 63420.3 MEAN 173 MAX 2500 MIN 6.0 CFSM .93 IN 12.62

04282000 OTTER CREEK AT CENTER RUTLAND, VT

LOCATION.--Lat 43°36'13", long 73°00'49", Rutland County, Hydrologic Unit 02010002, on right bank 500 ft (150 m) upstream from bridge on U.S. Highway 4 at Center Rutland, 200 ft (60 m) downstream from dam, 1.2 mi (1.9 km) downstream from East Creek, and 1.5 mi (2.4 km) west of Rutland.

DRAINAGE AREA.--307 mi^2 (795 km^2).

PERIOD OF RECORD.--Discharge: May 1928 to current year.
Water-quality records: Water years 1955, 1971.

REVISED RECORDS.--WSP 1084: 1929.

GAGE.--Water-stage recorder. Datum of gage is 474.80 ft (144.719 m) National Geodetic Vertical Datum of 1929; prior to Oct. 1, 1964, datum was 1.00 ft (0.305 m) higher. Prior to July 22, 1929, nonrecording gage at same site.

REMARKS.--Records good except those for periods of no gage-height record Jan. 9 to Feb. 19, which are poor. Flow regulated by powerplants and Chittenden Reservoir 14 mi (22.5 km) upstream on East Creek, usable capacity, 819,800,000 ft^3 (23,220,000 m^3). Prior to June 3, 1947, regulation by East Pittsford Reservoir, usable capacity, 150,000,000 ft^3 (4,250,000 m^3). Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--52 years, 551 ft^3/s (15.60 m^3/s), 24.37 in/yr (619 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,700 ft^3/s (388 m^3/s) Sept. 22, 1938, gage height, 13.45 ft (4.100 m), present datum, from rating curve extended above 7,400 ft^3/s (210 m^3/s) on basis of computation of peak flow over dam; minimum daily, 45 ft^3/s (1.27 m^3/s) Sept. 21, 1947, Aug. 7, 1965.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,400 ft^3/s (96 m^3/s) and maximum (*):

		Discharge		Gage height				Discharge		Gage height	
Date	Time	(ft^3/s)	(m^3/s)	(ft)	(m)	Date	Time	(ft^3/s)	(m^3/s)	(ft)	(m)
Apr. 11	0745	*4180	118	8.51	2.594						

Minimum daily discharge, 80 ft^3/s (2.27 m^3/s) Aug. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	173	262	480	250	140	94	980	508	154	126	80	535
2	160	267	417	240	130	96	891	490	210	127	480	473
3	218	699	386	230	130	98	790	448	486	127	570	768
4	522	769	428	200	125	98	1010	424	1390	101	310	410
5	380	522	410	216	120	100	1400	383	835	90	220	266
6	689	435	407	236	120	160	952	383	524	123	160	217
7	550	403	449	204	115	150	878	963	397	127	185	181
8	404	379	403	200	110	400	953	755	396	120	140	164
9	379	363	281	180	110	630	1020	576	391	238	135	212
10	414	508	334	170	110	560	2540	506	337	151	170	186
11	359	548	360	200	105	350	3820	443	326	130	125	163
12	349	417	390	370	105	270	2250	436	328	253	135	154
13	548	403	494	230	105	190	1590	419	304	191	150	104
14	467	373	442	240	110	170	1300	455	219	156	145	149
15	377	383	295	230	110	160	1160	425	183	95	211	195
16	379	350	290	220	110	150	1150	375	324	97	144	218
17	346	284	450	200	110	500	881	307	303	128	134	162
18	321	259	300	190	110	2300	739	302	251	110	160	344
19	308	301	220	185	105	2000	654	434	191	90	122	343
20	243	319	230	180	105	1100	596	399	160	82	140	304
21	207	295	250	165	110	1200	655	331	165	99	156	192
22	254	209	270	145	110	3000	612	307	170	500	138	190
23	261	221	280	165	110	2100	530	308	155	320	120	190
24	355	209	320	180	105	1400	496	243	164	480	110	180
25	387	267	720	145	100	1100	487	205	144	235	142	166
26	325	449	640	160	94	900	488	181	121	155	119	567
27	246	1660	450	160	88	750	471	181	113	125	98	407
28	202	1440	370	155	90	640	455	187	97	88	105	249
29	228	822	330	155	92	700	496	181	93	98	98	194
30	262	625	300	150	---	1300	591	172	104	96	111	222
31	256	---	270	140	---	1100	---	154	---	90	579	---
TOTAL	10569	14441	11666	6091	3184	23766	30835	11881	9035	4948	5692	8105
MEAN	341	481	376	196	110	767	1028	383	301	160	184	270
MAX	689	1660	720	370	140	3000	3820	963	1390	500	579	768
MIN	160	209	220	140	88	94	455	154	93	82	80	104
CFSM	1.11	1.57	1.23	.64	.36	2.50	3.35	1.25	.98	.52	.60	.88
IN.	1.28	1.75	1.41	.74	.39	2.88	3.74	1.44	1.09	.60	.69	.98

CAL YR 1979 TOTAL 218777 MEAN 599 MAX 5070 MIN 58 CFSM 1.95 IN 26.51
WTR YR 1980 TOTAL 140213 MEAN 383 MAX 3820 MIN 80 CFSM 1.25 IN 16.99

04282500 OTTER CREEK AT MIDDLEBURY, VT

LOCATION.--Lat 44°00'47", long 73°10'06", Addison County, Hydrologic Unit 02010002, on right bank 150 ft (46 m) upstream from highway bridge in Middlebury and 3.5 mi (5.6 km) downstream from Middlebury River.

DRAINAGE AREA.--628 mi^2 (1,627 km^2).

PERIOD OF RECORD.--Discharge: April 1903 to April 1907, October 1910 to January 1920, October 1928 to current year.
Water-quality records: Water years 1954, 1967-74.

REVISED RECORDS.--WSP 434: 1903-4. WSP 684: 1913(M), drainage area. WSP 1114: 1913. WSP 1207: 1929, 1931.

GAGE.--Water-stage recorder. Datum of gage is 335.75 ft (102.337 m) National Geodetic Vertical Datum of 1929. Apr. 1, 1903, to Apr. 30, 1907, and Oct. 5, 1910, to Jan. 31, 1920, nonrecording gage at site 1,800 ft (550 m) upstream at datum 10 ft (3 m) lower, and Oct. 1, 1928, to Oct. 17, 1933, at present datum.

REMARKS.--Records good except those for winter period, and periods of no gage-height record, Nov. 12 to Dec. 10, which are fair. Some regulation by Chittenden Reservoir, usable capacity, 819,800,000 ft^3 (23,220,000 m^3) on East Creek. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--64 years (water years 1904-06, 1911-19, 1929-80), 982 ft^3/s (27.81 m^3/s), 21.23 in/yr (539 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,000 ft^3/s (312 m^3/s) Mar. 20, 21, 1936, gage height, 10.3 ft (3.14 m); minimum daily, 92 ft^3/s (2.61 m^3/s) Aug. 9, 1965.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1830, 13,600 ft^3/s (385 m^3/s) Nov. 4, 1927, gage height, 13.3 ft (4.05 m), present datum, at site 1,800 ft (550 m) upstream, from rating curve extended above 9,000 ft^3/s (250 m^3/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,900 ft^3/s (82 m^3/s) Mar. 24 and Apr. 16, gage height, 4.74 ft (1.445 m); minimum daily, 162 ft^3/s (4.59 m^3/s) July 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	295	532	1900	585	280	210	2240	1010	340	380	255	500
2	335	507	1600	530	270	210	2160	969	403	364	227	679
3	327	795	1200	550	260	210	2030	928	559	351	536	935
4	387	1270	800	561	260	220	1930	868	1050	307	720	1030
5	632	1330	860	478	250	230	2020	827	1500	230	536	788
6	751	1060	800	491	240	280	2040	829	1450	209	867	615
7	961	851	880	446	240	320	2050	1230	1070	222	706	449
8	885	783	900	436	230	310	1990	1650	800	306	466	310
9	731	729	680	448	230	300	1940	1650	692	380	355	343
10	726	803	580	414	220	490	2070	1470	624	406	294	294
11	727	960	683	412	220	802	2210	1200	592	339	251	290
12	642	1050	732	900	210	776	2300	1040	575	326	298	247
13	755	920	768	1100	210	575	2480	971	587	310	294	235
14	844	860	843	850	210	430	2600	923	516	314	255	222
15	830	800	772	750	210	350	2800	903	449	330	322	232
16	749	840	610	690	210	340	2890	862	443	278	343	370
17	672	720	564	600	210	310	2880	804	572	247	270	360
18	656	620	723	550	220	1410	2800	705	558	232	206	360
19	617	540	765	500	220	1680	2670	782	477	258	306	417
20	585	600	563	440	230	1710	2470	851	423	211	258	417
21	466	640	530	400	240	1810	2230	770	365	162	227	339
22	414	560	531	350	240	2100	1980	695	358	232	232	318
23	524	460	500	360	240	2730	1710	612	343	621	225	314
24	574	470	537	370	230	2860	1400	601	381	733	198	318
25	659	500	871	360	210	2900	1160	502	342	640	179	318
26	747	1000	1310	350	210	2880	1050	427	338	466	225	449
27	716	1500	1420	340	210	2780	1000	402	317	330	217	831
28	591	1700	1440	330	210	2630	949	415	291	239	211	699
29	443	1900	1260	320	210	2460	897	389	228	227	211	524
30	518	1950	962	300	---	2390	940	403	190	282	193	466
31	566	---	753	290	---	2300	---	332	---	286	190	---
TOTAL	19325	27250	27337	15501	6630	39003	59886	26020	16833	10218	10073	13669
MEAN	623	908	882	500	229	1258	1996	839	561	330	325	456
MAX	961	1950	1900	1100	280	2900	2890	1650	1500	733	867	1030
MIN	295	460	500	290	210	210	897	332	190	162	179	222
CFSM	.90	1.45	1.40	.80	.37	2.00	3.18	1.34	.89	.53	.52	.73
IN.	1.14	1.61	1.62	.92	.39	2.31	3.55	1.54	1.00	.61	.60	.81

CAL YR 1979 TOTAL 399968 MEAN 1096 MAX 4800 MIN 175 CFSM 1.75 IN 23.69
WTR YR 1980 TOTAL 271745 MEAN 742 MAX 2900 MIN 162 CFSM 1.18 IN 16.10

04284000 JAIL BRANCH AT EAST BARRE, VT

LOCATION.--Lat 44°09'30", long 72°26'44", Washington County, Hydrologic Unit 02010003, on right bank 1,400 ft (430 m) upstream from highway bridge, at East Barre, 1,400 ft (430 m) downstream from East Barre Detention Reservoir, and 4.2 mi (6.8 km) upstream from mouth.

DRAINAGE AREA.--38.9 mi^2 (100.8 km^2).

PERIOD OF RECORD.--August 1920 to September 1923, October 1933 to current year. October 1933 monthly discharge only, published in WSP 1307. Prior to October 1922, published as Jail Brook at East Barre.

REVISED RECORDS.--WSP 564: 1922. WSP 1034: Drainage area. WSP 1307: 1921-23(M).

GAGE.--Water-stage recorder. Datum of gage is 1,107.25 ft (337.490 m) National Geodetic Vertical Datum of 1929. Aug. 14, 1920, to Sept. 30, 1923, nonrecording gage at site 0.1 mi (0.2 km) downstream at different datum. Nov. 1, 1933, to Jan. 25, 1935, nonrecording gage and Jan. 26, 1935, to Aug. 7, 1972, water-stage recorder at site 1,500 ft (460 m) downstream. Datum of gage was 1,071.59 ft (326.621 m) National Geodetic Vertical Datum of 1929 Nov. 1, 1933, to Sept. 30, 1964, and 1,069.59 ft (326.011 m) NGVD Oct. 1, 1964, to Aug. 7, 1972 (levels by Corps of Engineers).

REMARKS.--Records good except those for winter period, which are poor. Discharge affected by East Barre Detention Reservoir since 1935 (Reservoirs in Winooski River basin). Prior to 1964, occasional diurnal fluctuation at low flow caused by mill upstream. Diversion from reservoir on Orange Brook, a tributary upstream, for city of Barre. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--50 years, 54.3 ft^3/s (1.538 m^3/s), 18.96 in/yr (482 mm/yr), adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,820 ft^3/s (51.5 m^3/s) Oct. 1, 1920, gage height, 9.50 ft (2.896 m), from graph based on gage readings, site and datum then in use, from rating curve extended above 900 ft^3/s (25 m^3/s); minimum, 0.1 ft^3/s (0.003 m^3/s) Aug. 18, 1950, Aug. 3, 4, 31, Sept. 1, 3, 1953. Maximum discharge since construction of East Barre Detention Reservoir in 1935, 634 ft^3/s (18.0 m^3/s) Apr. 19, 1969, gage height, 3.31 ft (1.009 m), site and datum then in use; maximum gage height, 9.48 ft (2.890 m) Jan. 7, 1973, ice jam.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 462 ft^3/s (13.1 m^3/s) Apr. 10, gage height, 4.50 ft (1.372 m); maximum gage height, 5.18 ft (1.579 m); Mar. 18, ice jam; minimum, 1.7 ft^3/s (0.048 m^3/s) Aug. 25-28, Sept. 12-14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.1	12	29	18	7.8	3.7	133	93	20	5.8	3.2	13
2	5.8	11	25	18	7.4	3.6	119	80	24	5.8	2.7	6.1
3	5.8	83	24	16	6.8	3.5	93	57	35	7.5	6.1	11
4	19	47	23	14	6.4	3.4	106	52	125	7.1	5.8	5.5
5	10	32	21	13	5.8	3.3	142	47	90	6.5	4.3	3.9
6	57	25	18	12	5.2	3.5	88	46	46	5.8	3.7	3.2
7	22	22	20	12	4.4	3.8	87	164	31	5.2	4.3	2.8
8	11	21	19	12	4.7	4.0	108	125	29	4.6	3.2	2.3
9	9.5	18	17	11	4.4	4.5	127	93	40	9.5	2.7	2.1
10	9.5	35	17	11	4.2	4.8	414	80	29	6.5	2.2	2.2
11	11	31	17	13	4.0	6.0	401	65	24	4.6	2.1	2.2
12	23	24	17	80	3.9	5.0	191	60	21	4.4	2.1	1.9
13	62	21	18	30	3.9	3.9	198	53	17	4.4	2.3	1.7
14	26	20	16	20	4.0	4.0	153	57	14	4.3	2.4	4.4
15	17	19	14	27	3.9	3.9	140	55	12	3.5	2.7	22
16	15	17	16	22	4.0	5.5	144	47	17	3.2	2.8	7.9
17	14	15	15	18	3.9	10	97	42	15	4.1	2.8	4.9
18	12	13	14	17	3.9	280	80	42	11	4.9	2.7	7.5
19	11	13	12	16	3.8	200	63	75	9.5	3.5	2.2	7.9
20	9.5	13	12	14	4.0	90	59	65	8.9	3.5	2.2	5.2
21	9.5	13	12	13	4.2	80	78	49	26	4.3	2.2	4.4
22	9.5	13	12	14	4.3	115	78	40	19	6.8	2.2	7.5
23	8.4	17	13	13	4.1	125	65	35	14	7.9	1.9	7.9
24	27	17	15	12	3.8	115	60	31	10	8.9	1.8	5.8
25	31	18	76	12	4.0	94	60	29	7.5	5.8	1.7	4.3
26	17	57	70	11	3.8	74	82	23	7.2	4.4	1.7	34
27	14	241	50	11	4.0	80	104	21	6.7	4.1	1.7	24
28	14	88	32	10	3.9	150	83	19	6.4	3.9	2.8	11
29	13	55	26	9.4	3.8	182	75	17	5.8	3.0	3.9	7.5
30	13	42	23	8.8	---	262	92	16	5.8	3.2	2.7	5.2
31	13	---	21	8.2	---	166	---	16	---	3.3	3.9	---
TOTAL	525.6	1053	714	516.4	132.3	2089.4	3720	1694	726.8	160.3	89.0	229.3
MEAN	17.0	35.1	23.0	16.7	4.56	67.4	124	54.6	24.2	5.17	2.87	7.64
MAX	62	241	76	80	7.8	280	414	164	125	9.5	6.1	34
MIN	5.8	11	12	8.2	3.8	3.3	59	16	5.8	3.0	1.7	1.7
MEAN†	17.1	35.6	22.6	16.5	4.44	71.9	124	51.1	23.9	5.02	2.87	7.57
CFSM†	.44	.92	.58	.42	.11	1.85	3.19	1.31	.61	.13	.07	.19
IN†	.51	1.02	.67	.49	.12	2.13	3.55	1.51	.69	.15	.09	.22

CAL YR 1979 TOTAL 21238.1 MEAN 58.2 MAX 540 MIN 2.4 MEAN† 58.2 CFSM† 1.50 IN† 20.31
WTR YR 1980 TOTAL 11650.1 MEAN 31.8 MAX 414 MIN 1.7 MEAN† 31.8 CFSM† .82 IN† 11.14

† Adjusted for change in contents in East Barre Detention Reservoir.

04285500 NORTH BRANCH WINOOSKI RIVER AT WRIGHTSVILLE, VT

LOCATION.--Lat 44°17'58", long 72°34'45", Washington County, Hydrologic Unit 02010003, on right bank at Wrightsville, 0.8 mi (1.3 km) downstream from Wrightsville Detention Reservoir, and 3.5 mi (5.6 km) upstream from mouth.

DRAINAGE AREA.--69.2 mi^2 (179.2 km^2).

PERIOD OF RECORD.--Discharge: October 1933 to current year.
Water-quality records: Water year 1957.

REVISED RECORDS.--WSP 1237: 1937: 1934-39.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 550.53 ft (167.802 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Nov. 21, 1934, nonrecording gage at same site and datum.

REMARKS.--Records good except those for winter period, which are fair, and period of no gage-height record, July 10 to Aug. 11, and periods of backwater from a beaver dam, Oct. 1 to Nov. 27, which are poor. Discharge affected since 1935 by Wrightsville Detention Reservoir (Reservoirs in Winooski River basin). Occasional diurnal fluctuation at low flow caused by small mill upstream; more frequent diurnal fluctuation prior to 1968. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--47 years, 134 ft^3/s (3.795 m^3/s), 26.30 in/yr (668 mm/yr), adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,170 ft^3/s (61.5 m^3/s) Apr. 12, 1934, gage height, 6.53 ft (1.990 m), from rating curve extended above 920 ft^3/s (26 m^3/s); minimum daily, 0.2 ft^3/s (0.006 m^3/s) Aug. 13, 1941. Maximum discharge since construction of Wrightsville Detention Reservoir in 1935, 1,040 ft^3/s (29.5 m^3/s) Mar. 21, 1936, gage height, 4.32 ft (1.317 m); maximum gage height, 5.43 ft (1.655 m) Mar. 12, 1936, ice jam.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1830, 17,200 ft^3/s (487 m^3/s) Nov. 3, 1927, by computation of peak flow over dam 0.8 mi (1.3 km) above gage.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 580 ft^3/s (16.4 m^3/s) Apr. 14, gage height, 3.22 ft (0.981 m); minimum daily, 11 ft^3/s (0.31 m^3/s) Mar. 3-5, Sept. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	90	323	75	20	13	390	127	44	22	36	290
2	32	100	171	68	19	12	373	121	45	22	82	185
3	37	245	101	64	17	11	335	108	49	23	62	120
4	45	270	101	66	17	11	301	94	107	20	49	40
5	45	170	95	48	17	11	301	80	112	14	36	30
6	196	140	90	41	16	12	268	77	66	15	32	22
7	120	125	110	37	16	13	201	251	47	19	43	17
8	85	110	108	40	16	14	232	292	51	18	30	13
9	77	98	74	42	15	15	223	236	86	25	17	11
10	77	125	83	41	15	15	428	176	60	23	16	15
11	77	125	81	40	14	16	541	141	49	19	12	14
12	82	100	104	194	12	17	547	128	42	16	17	13
13	215	90	136	105	12	23	565	107	37	16	33	14
14	227	80	98	70	12	18	567	99	32	16	35	30
15	157	78	69	100	12	19	554	88	27	15	46	150
16	176	76	81	83	13	36	546	77	31	14	35	96
17	128	66	88	62	13	17	504	68	28	17	31	57
18	118	84	70	58	13	100	450	76	22	28	22	173
19	103	78	68	54	13	180	382	277	19	23	23	124
20	96	71	64	50	14	132	312	223	18	18	47	80
21	103	90	45	48	14	130	249	127	52	16	40	74
22	100	80	43	50	15	177	176	98	66	35	29	194
23	100	110	46	37	15	227	139	76	43	110	27	203
24	188	96	60	39	14	222	135	64	31	47	19	144
25	310	140	304	37	14	220	137	55	25	35	16	92
26	215	350	448	34	14	184	153	47	21	25	12	167
27	135	465	419	31	14	198	149	42	16	47	13	166
28	115	480	356	29	13	272	139	38	15	100	24	113
29	115	442	251	25	13	320	132	34	14	49	37	85
30	125	388	120	21	---	384	132	31	16	49	27	73
31	100	---	82	21	---	408	---	30	---	47	110	---
TOTAL	3724	4962	4289	1710	422	3427	9561	3488	1271	943	1058	2805
MEAN	120	165	138	55.2	14.6	111	319	113	42.4	30.4	34.1	93.5
MAX	310	480	448	194	20	408	567	292	112	110	110	290
MIN	25	66	43	21	12	11	132	30	14	14	12	11
MEAN†	121	174	130	54.4	14.5	123	308	112	42.3	30.7	36.8	19.2
CFSM†	1.75	2.51	1.88	.79	.21	1.78	4.45	1.62	.61	.44	.53	1.32
IN†	2.01	2.80	2.17	.91	.23	2.04	4.96	1.86	.68	.51	.61	1.47

CAL YR 1979 TOTAL 58823.7 MEAN 161 MAX 754 MIN 7.2 MEAN† 161 CFSM† 2.33 IN† 31.63
WTR YR 1980 TOTAL 37660.0 MEAN 103 MAX 567 MIN 11 MEAN† 103 CFSM† 1.49 IN† 20.26

† Adjusted for change in contents in Wrightsville Detention Reservoir.

RESERVOIRS IN WINOOSKI RIVER BASIN ABOVE MONTPELIER, VT

04283500 EAST BARRE DETENTION RESERVOIR.--Lat 44°09'18", long 72°26'42", Washington County, Hydrologic Unit 02010003, at dam on Jail Branch at East Barre, 4.5 mi (7.2 km) upstream from mouth. DRAINAGE AREA, 38.8 mi^2 (100.5 km^2). PERIOD OF RECORD, February 1936 (in WSP 1307), March and April 1936 (in WSP 798), May 1936 to August 1938 (in WSP 1307), September 1938 (in WSP 867), October 1938 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Aug. 30, 1960, nonrecording gage, and Aug. 30 to Sept. 30, 1960, water-stage recorder, at present site at datum 1,127.9 ft (343.78 m) National Geodetic Vertical Datum of 1929.

Reservoir is formed by earthfill dam completed by Corps of Engineers in 1935 for flood control. Usable capacity, 525,000,000 ft^3 (14,900,000 m^3) between elevation 1,124.9 ft (342.87 m, bottom of outlet opening) and 1,165.0 ft (355.09 m, crest of spillway). Dam has no gates; below elevation 1,165.0 ft (355.09 m), outflow from reservoir is dependent on capacity of outlet opening near base of dam. Outlet-opening enlargement and reservoir-construction modifications completed in November 1959. Size of opening since enlargement, height, 7 ft (2.1 m) and average width, 3.7 ft (1.13 m). Figures given herein represent usable contents.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 1,163.9 ft (354.76 m), present datum, Mar. 22, 1936; minimum not determined.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 1,140.42 ft (347.600 m) Apr. 10; minimum, 1,127.64 ft (343.705 m) Dec. 20.

04285000 WRIGHTSVILLE DETENTION RESERVOIR.--Lat 44°18'38", long 72°34'31", Washington County, Hydrologic Unit 02010003, at dam on North Branch Winooski River at Wrightsville, 0.3 mi (0.5 km) downstream from Long Meadow Brook, and 4.2 mi (6.8 km) upstream from mouth. DRAINAGE AREA, 66.5 mi^2 (172.2 km^2). PERIOD OF RECORD, November 1935 to February 1936 (in WSP 1307), March to May 1936 (in WSP 798), June 1936 to August 1938 (in WSP 1307), September 1938 (in WSP 867), October 1938 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to July 28, 1960, nonrecording gage, and July 28 to Sept. 30, 1960, water-stage recorder, at present site at datum 612.75 ft (186.766 km) National Geodetic Vertical Datum of 1929.

Reservoir is formed by earthfill dam completed by Corps of Engineers in 1935 for flood control; modification of intake-structure works to create a recreational pool completed in June 1965. Usable capacity for recreation, 22,000,000 ft^3 (620,000 m^3) between elevations 612.75 ft (186.766 m, bottom of outlet opening) and 620.00 ft (188.976 m); for flood control, 851,500,000 ft^3 (24,110,000 m^3) between elevations 620.00 ft (188.976 m) and 685.00 ft (208.788 m, crest of spillway); total usable capacity, 873,500,000 ft^3 (24,740,000 m^3). Dam has no gates; below elevation 685.00 ft (208.788 m), outflow from reservoir is dependent on capacity of outlet opening, 5.25 ft (1.600 m) square near base of dam. Figures given herein represent usable contents.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 676.4 ft (206.17 m), present datum, Mar. 22, 1936, from graph based on gage readings; minimum observed, 613.00 ft (186.84 m) Aug. 17, 1949, and Aug. 17-19, 1950.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 637.90 ft (194.432 m) Apr. 13; minimum, 616.68 ft (187.964 m) Sept. 9.

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

Date	Elevation (feet)	Contents (millions of cubic feet)	Change in contents	
			Millions of cubic feet	Equivalent, cubic feet per second
		04283500 East Barre Detention Reservoir		
Sept. 30	1127.88	*3.1	-	-
Oct. 31	1128.21	*3.4	+0.3	+0.11
Nov. 30	1129.23	*4.6	+1.2	+.46
Dec. 31	1128.37	3.6	-1.0	-.37
CAL YR 1979	-	-	-.4	-.01
Jan. 31	1128.02	3.2	-0.4	-.15
Feb. 29	1127.70	*2.9	-.3	-.12
Mar. 31	1135.76	14.9	+12.0	+4.48
Apr. 30	1135.34	14.0	-.9	-.35
May 31	1129.02	4.4	-9.6	-3.58
June 30	1128.27	*3.5	-.9	-.35
July 31	1127.91	*3.1	-.4	-.15
Aug. 31	1127.88	3.1	0	0
Sept. 30	1127.73	2.9	-.2	-.08
WTR YR 1980	-	-	-.2	-.01
		04285000 Wrightsville Detention Reservoir		
Sept. 30	*620.17	22.7	-	-
Oct. 31	*620.68	24.7	+2.0	+.75
Nov. 30	625.44	46.0	+21.3	+8.22
Dec. 31	620.62	24.4	-21.6	-8.06
CAL YR 1979	-	-	+1.1	+.03
Jan. 31	620.10	22.4	-2.0	-.75
Feb. 29	620.05	22.2	-.2	-.08
Mar. 31	627.03	54.3	+32.1	+12.0
Apr. 30	620.82	25.3	-29.0	-11.2
May 31	620.20	22.8	-2.5	-.93
June 30	620.13	22.5	-.3	-.12
July 31	620.32	23.3	+.8	+.30
Aug. 31	622.07	30.4	+7.1	+2.65
Sept. 30	620.62	24.4	-60	-2.31
WTR YR 1980	-	-	+1.7	+.05

* Estimated.

04286000 WINOOSKI RIVER AT MONTPELIER, VT

LOCATION.--Lat 44°15'23", long 72°35'36", Washington County, Hydrologic Unit 02010003, on right bank 0.4 mi (0.6 km) upstream from Dog River and 1 mi (1.6 km) downstream from depot at Montpelier.

DRAINAGE AREA.--397 mi^2 (1,028 km^2).

PERIOD OF RECORD.--May 1909 to June 1914 (fragmentary), July 1914 to September 1923, August 1928 to current year.

REVISED RECORDS.--WSP 424: 1915. WSP 894: Drainage area. WSP 1437: 1912-14(M), 1915-18, 1919(M), 1920, 1921(M), 1922-23, 1929, 1933, 1934(M), 1936, 1937(M), 1938, 1946(M). WDR MA-NH-RI-VT-72-1: 1969(M), 1970(P), 1971(M).

GAGE.--Water-stage recorder. Datum of gage is 499.99 ft (152.397 m) National Geodetic Vertical Datum of 1929. Prior to June 16, 1914, nonrecording gage at site 0.9 mi (1.4 km) upstream at different datum. June 16 to July 3, 1914, nonrecording gage at present site and datum.

REMARKS.--Records good except those for winter period, which are fair. Flow regulated by several small powerplants upstream, by Peacham Pond and, since 1926, by Mollys Falls Reservoir, combined usable capacity, 492,000,000 ft^3 (13,900,000 m^3), which regulate runoff from 24 mi^2 (62 km^2), and by East Barre and Wrightsville Detention Reservoirs since 1935 (Reservoirs in Winooski River basin). See table below for monthend contents in Peacham Pond and Mollys Falls Reservoir. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--61 years (water years 1915-23, 1929-80), 586 ft^3/s (16.60 m^3/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,200 ft^3/s (487 m^3/s) Apr. 7, 1912, gage height, 17.31 ft (5.276 m), from floodmarks, present datum, from rating curve extended above 6,900 ft^3/s (200 m^3/s); maximum gage height, 17.55 ft (5.349 m) June 30, 1973; minimum daily discharge, 17 ft^3/s (0.48 m^3/s) Sept. 3, 1933.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1830, 57,000 ft^3/s (1,610 m^3/s) Nov. 3, 1927, gage height, 27.1 ft (8.26 m), from rating curve extended above 6,900 ft^3/s (200 m^3/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,950 ft^3/s (83.5 m^3/s) Apr. 10, gage height, 7.41 ft (2.259 m), no peak above base of 3,900 ft^3/s (110 m^3/s); maximum gage height, 13.84 ft (4.218 m) Mar. 18, ice jam; minimum daily discharge, 63 ft^3/s (1.78 m^3/s) Sept. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	131	331	753	405	250	100	1090	648	251	144	131	544
2	158	348	557	360	260	90	1030	628	295	137	240	426
3	151	854	405	350	200	80	886	556	337	131	197	392
4	195	781	458	270	140	70	851	498	633	124	169	281
5	213	525	431	235	210	90	1050	442	624	103	203	200
6	620	419	406	250	205	120	816	441	444	106	141	182
7	341	356	475	255	140	150	695	1230	308	113	205	148
8	236	330	432	250	120	130	764	1150	299	110	186	119
9	218	301	318	220	135	100	772	892	443	126	137	97
10	291	371	323	190	150	115	2280	756	347	116	88	76
11	302	379	355	280	90	170	2030	653	300	97	78	73
12	329	323	402	1200	140	190	1490	617	285	86	121	68
13	614	283	502	600	150	170	1660	544	281	157	137	63
14	503	276	417	480	160	140	1430	539	268	161	183	99
15	382	270	314	820	195	110	1350	484	199	84	160	379
16	461	262	378	560	175	65	1350	437	223	80	155	269
17	397	268	310	370	130	80	1160	392	228	115	119	192
18	378	269	240	320	85	1750	996	391	201	134	103	387
19	355	269	210	325	115	1300	871	839	164	108	112	342
20	332	281	250	270	190	700	788	754	185	88	162	215
21	278	294	230	230	200	750	800	536	239	91	145	190
22	275	283	230	310	160	1270	700	447	277	131	119	312
23	355	317	220	330	165	1050	601	407	213	320	132	595
24	512	284	280	350	130	1100	587	387	175	297	90	501
25	726	363	1460	240	80	980	609	306	155	184	78	339
26	551	808	1590	260	130	780	701	278	147	140	103	582
27	398	1970	971	230	140	762	750	264	138	139	74	573
28	284	1200	778	200	155	1060	665	224	134	208	113	344
29	317	970	654	220	150	1200	641	227	106	143	125	274
30	399	856	498	240	---	1550	677	222	103	146	109	284
31	357	---	403	230	---	1230	---	189	---	162	213	---
TOTAL	11059	14841	15250	10850	4550	17452	30090	16378	8002	4281	4328	8546
MEAN	357	495	492	350	157	563	1003	528	267	138	140	285
MAX	726	1970	1590	1200	260	1750	2280	1230	633	320	240	595
MIN	131	262	210	190	80	65	587	189	103	80	74	63
(†)	322.1	321.2	316.0	264.6	163.3	193.2	345.5	415.3	423.5	436.4	426.3	422.3

CAL YR 1979 TOTAL 224239 MEAN 614 MAX 4960 MIN 85
WTR YR 1980 TOTAL 145627 MEAN 398 MAX 2280 MIN 63

† Monthend contents, in millions of cubic feet, in Peacham Pond and Mollys Falls Reservoir; records furnished by Green Mountain Power Corp.

04287000 DOG RIVER AT NORTHFIELD FALLS, VT

LOCATION.--Lat 44°10'58", long 72°38'27", Washington County, Hydrologic Unit 02010003, on right bank 1 mi (1.6 km) downstream from Northfield Falls and 1.2 mi (1.9 km) downstream from Cox Branch.

DRAINAGE AREA.--76.1 mi^2 (197.1 km^2).

PERIOD OF RECORD.--Discharge: October 1934 to current year. October 1934 monthly discharge only, published in WSP 1307.
Water-quality records: Water year 1957.

REVISED RECORDS.--WSP 1237: 1935-37.

GAGE.--Water-stage recorder. Datum of gage is 603.00 ft (183.794 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Records good except those for winter period, which are fair. Infrequent diurnal fluctuation at low flow by powerplant upstream; regulation much greater prior to 1955. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--46 years, 122 ft^3/s (3.455 m^3/s), 21.77 in/yr (553 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,600 ft^3/s (300 m^3/s) June 30, 1973, gage height, 11.57 ft (3.527 m), from rating curve extended above 1,500 ft^3/s (42.5 m^3/s) on basis of computation of flow over dam at gage height 8.49 ft (2.588 m) and slope-area measurements at gage heights 8.96 ft (2.731 m), 11.53 ft (3.514 m), and 11.57 ft (3.527 m); minimum, 4.3 ft^3/s (0.12 m^3/s) Aug. 31, Sept. 7, 1942.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,600 ft^3/s (45 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Apr. 10	0500	*2830	80.1	6.02	1.835						

Minimum discharge, 7.1 ft^3/s (0.20 m^3/s) Sept. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	65	135	85	38	18	252	132	66	36	16	17
2	27	71	123	85	36	18	218	128	67	28	15	15
3	28	156	109	62	32	18	188	119	85	29	16	19
4	46	134	105	59	30	16	196	109	180	22	19	14
5	37	106	100	59	28	16	267	102	140	19	15	11
6	110	99	99	54	24	17	187	104	93	21	21	11
7	76	94	102	54	22	18	184	293	77	20	18	9.7
8	60	93	95	61	23	18	188	294	83	23	15	8.9
9	58	87	77	58	22	23	418	198	92	29	13	8.5
10	59	128	83	54	21	22	1420	167	75	20	11	8.6
11	59	107	80	67	20	30	753	146	69	18	11	8.2
12	70	94	86	383	19	21	410	134	63	17	13	7.6
13	155	89	87	110	20	18	540	122	57	17	15	7.3
14	149	86	73	99	19	19	333	128	50	15	13	15
15	108	80	65	141	20	18	438	112	47	14	15	20
16	106	78	75	98	20	18	339	103	54	17	13	14
17	89	73	71	87	19	22	241	94	47	18	11	11
18	82	76	58	83	20	563	204	95	41	20	11	21
19	75	73	52	82	19	200	179	137	37	15	10	17
20	72	69	57	74	20	140	167	113	40	14	13	13
21	67	68	56	65	21	161	182	97	52	16	12	12
22	64	70	56	65	21	239	155	88	45	20	11	22
23	61	77	59	67	20	249	142	80	38	36	9.9	32
24	127	72	71	58	19	247	135	73	35	36	9.3	23
25	127	84	362	58	20	206	130	68	31	21	8.9	17
26	95	226	282	57	19	156	132	61	27	17	8.7	44
27	83	615	168	53	19	191	127	57	25	18	8.7	38
28	77	264	127	50	20	293	121	53	23	16	12	23
29	79	194	116	48	19	357	132	47	21	14	12	19
30	74	157	107	44	---	445	149	47	31	17	10	16
31	68	---	85	42	---	276	---	45	---	18	15	---
TOTAL	2415	3685	3221	2462	650	4053	8527	3546	1791	641	401.5	502.8
MEAN	77.9	123	104	79.4	22.4	131	284	114	59.7	20.7	13.0	16.8
MAX	155	615	362	383	38	563	1420	294	180	36	21	44
MIN	27	65	52	42	19	16	121	45	21	14	8.7	7.3
CFSM	1.02	1.62	1.37	1.04	.29	1.72	3.73	1.50	.78	.27	.17	.22
IN.	1.18	1.80	1.57	1.20	.32	1.98	4.17	1.73	.88	.31	.20	.25

CAL YR 1979 TOTAL 50092.0 MEAN 137 MAX 1930 MIN 14 CFSM 1.80 IN 24.49
WTR YR 1980 TOTAL 31895.3 MEAN 87.1 MAX 1420 MIN 7.3 CFSM 1.15 IN 15.59

04288000 MAD RIVER NEAR MORETOWN, VT

LOCATION.--Lat 44°16'42", long 72°44'37", Washington County, Hydrologic Unit 02010003, on left bank at downstream side of highway bridge, 2.4 mi (3.9 km) downstream from Moretown, and 3.8 mi (6.1 km) upstream from mouth.

DRAINAGE AREA.--139 mi^2 (360 km^2).

PERIOD OF RECORD.--Discharge: July to November 1910, October 1928 to current year. October 1928 monthly discharge only, published in WSP 1307.

Water-quality records: Water years 1954-55, 1957, 1967-74.

REVISED RECORDS.--WSP 744: Drainage area. WSP 854: 1934(M). WSP 1114: 1929, 1930(M), 1936-37.

GAGE.--Water-stage recorder. Concrete control since Oct. 13, 1933. Datum of gage is 543.93 ft (165.790 m) National Geodetic Vertical Datum of 1929 (levels by Vermont Department of Highways). July 6 to Nov. 4, 1910, nonrecording gage at same site at different datum. Nov. 20, 1928, to Sept. 27, 1930, nonrecording gage at same site at present datum.

REMARKS.--Records good except those for winter period and those for periods of no gage-height record, Jan. 16 to Mar. 24, Apr. 4 to May 6, which are poor. Occasional diurnal fluctuation at low flow; much greater regulation prior to 1958. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--52 years (water years 1928-80), 255 ft^3/s (7.222 m^3/s), 24.91 in/yr (633 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,400 ft^3/s (521 m^3/s) Sept. 22, 1938, gage height, 16.34 ft (4.980 m), from floodmarks, from rating curve extended above 2,700 ft^3/s (76 m^3/s) on basis of computations of flow over dam at gage heights 9.98 ft (3.042 m), 11.51 ft (3.508 m), 16.34 ft (4.980 m), and 19.4 ft (5.91 m); minimum, 1.4 ft^3/s (0.040 m^3/s) Oct. 1, 1930.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1830, 23,000 ft^3/s (650 m^3/s) Nov. 3, 1927, gage height, 19.4 ft (5.91 m), from floodmarks, by computation of peak flow over dam.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,400 ft^3/s (96 m^3/s) and maximums (*):

Date	Time	Discharge		Gage height		Date	Time	Discharge		Gage height	
		(ft^3/s)	(m^3/s)	(ft)	(m)			(ft^3/s)	(m^3/s)	(ft)	(m)
Nov. 27	0130	3580	101	7.19	2.192	Apr. 10	unknown	*3710	105	a7.30	2.225
Mar. 22 or 23	--	ice jam		a*12.76	3.889						

a From peak-stage indicator.

Minimum discharge, 22 ft^3/s (0.62 m^3/s) Sept. 12, 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	71	139	286	155	58	28	410	230	179	108	62	138
2	69	157	255	140	55	28	380	210	148	57	54	70
3	67	471	233	115	50	27	330	200	207	64	49	59
4	85	369	216	105	46	26	350	190	519	46	66	46
5	75	265	192	105	43	26	450	180	306	38	51	39
6	379	227	195	100	39	27	350	190	180	41	70	35
7	206	200	217	98	34	29	310	640	135	34	69	30
8	159	181	185	100	35	30	360	692	172	34	48	28
9	151	164	150	100	34	36	700	424	184	53	40	25
10	157	281	165	100	32	35	2300	355	132	37	33	29
11	148	228	176	110	31	46	1300	293	116	31	33	26
12	178	190	169	560	29	35	700	265	102	30	83	23
13	481	170	186	240	30	29	900	231	89	31	54	22
14	393	159	157	170	29	30	600	246	75	27	50	55
15	293	150	193	220	30	29	700	206	66	24	57	93
16	379	144	200	160	30	29	580	177	88	30	50	53
17	274	130	133	140	29	37	470	152	69	47	47	41
18	280	143	92	130	30	1200	380	172	58	86	38	121
19	249	130	94	125	29	600	320	307	53	38	38	79
20	229	128	96	115	30	220	280	225	53	30	44	57
21	217	137	98	105	31	250	300	175	77	37	38	51
22	188	162	96	98	32	350	270	148	71	73	33	62
23	167	241	110	100	31	370	260	124	53	181	29	115
24	319	180	200	94	29	360	230	110	50	150	27	88
25	282	245	900	88	30	320	220	97	44	79	25	62
26	216	614	600	86	29	290	230	84	39	55	24	147
27	183	1650	350	82	30	270	220	77	36	79	25	151
28	164	615	265	78	30	350	210	71	34	67	42	94
29	167	439	240	72	31	500	220	66	32	48	34	71
30	164	344	195	68	---	660	240	61	36	82	29	62
31	147	---	175	62	---	430	---	59	---	96	134	---
TOTAL	6537	8653	6819	4021	996	6697	14570	6657	3403	1833	1476	1972
MEAN	211	288	220	130	34.3	216	486	215	113	59.1	47.6	65.7
MAX	481	1650	900	560	58	1200	2300	692	519	181	134	151
MIN	67	128	92	62	29	26	210	59	32	24	24	22
CFSM	1.52	2.07	1.58	.94	.25	1.55	3.50	1.55	.81	.43	.34	.47
IN.	1.75	2.32	1.82	1.08	.27	1.79	3.90	1.78	.91	.49	.40	.53

CAL YR 1979 TOTAL 101962 MEAN 279 MAX 2510 MIN 24 CFSM 2.01 IN 27.29
WTR YR 1980 TOTAL 63634 MEAN 174 MAX 2300 MIN 22 CFSM 1.25 IN 17.03

04288500 WATERBURY RESERVOIR NEAR WATERBURY, VT

LOCATION.--Lat 44°22'54", long 72°46'13", Washington County, Hydrologic Unit 02010003, at dam on Little River 2.7 mi (4.3 km) upstream from mouth and 3.5 mi (5.6 km) north of Waterbury.

DRAINAGE AREA.--109 mi^2 (282 km^2).

PERIOD OF RECORD.--Elevation: September 1937 to current year. September 1937 to September 1938 monthend contents only, published in WSP 1307.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Dec. 10, 1938, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by earthfill dam completed by Corps of Engineers during summer of 1937 for flood control and storage of water for power. Usable capacity for storage of water for power, 1,582,700,000 ft^3 (44,822,000 m^3) between elevations 500.0 ft (152.40 m) and 592.0 ft (180.44 m), sill of taintor gate; for flood control, 1,229,000,000 ft^3 (34,822,000 m^3) between elevations 592.0 ft (180.44 m) and 617.5 ft (188.21 m), crest of spillway; total usable capacity, 2,812,300,000 ft^3 (79,644,000 m^3).

Capacity table (elevation, in feet, and contents, in millions of cubic feet)

530.0	180.8	570.0	891.9
540.0	302.7	580.0	1,168.5
550.0	461.7	590.0	1,505.0
560.0	658.8	600.0	1,913.4

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 613.45 ft (186.980 m) May 4, 1940; minimum observed, 501.3 ft (152.80 m) Oct. 16, 1938.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 594.33 ft (181.152 m) Nov. 27; minimum, 556.86 ft (169.731 m) Mar. 17.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	589.08	589.49	591.20	590.03	577.20	562.97	572.89	585.15	590.13	588.38	590.60	591.08
2	588.70	589.48	591.59	589.82	576.72	562.82	572.16	585.82	590.03	588.55	590.87	591.78
3	588.33	590.27	591.06	589.54	576.24	562.31	571.27	586.41	589.87	588.76	591.71	591.53
4	587.95	591.06	590.86	589.15	574.34	561.88	570.50	586.85	590.03	588.85	591.31	591.25
5	587.59	590.81	590.56	588.53	574.30	561.48	570.17	586.85	589.96	588.93	590.80	590.65
6	588.22	590.69	590.44	587.98	573.29	561.06	569.22	587.19	589.75	589.06	590.74	590.38
7	588.51	590.59	590.42	587.37	572.31	560.67	568.25	588.55	589.70	589.13	590.68	590.51
8	588.75	590.44	590.63	586.80	571.53	560.33	567.36	589.51	589.95	589.25	590.28	590.17
9	588.38	590.28	590.65	586.23	571.48	560.52	567.50	589.81	589.75	589.45	589.97	589.73
10	588.00	590.34	590.51	585.62	571.45	559.98	571.37	589.79	589.47	589.52	590.07	589.81
11	587.66	590.58	590.39	585.09	570.52	559.43	573.11	590.28	589.16	589.58	590.13	589.41
12	587.46	590.48	590.30	585.83	570.11	558.73	573.56	590.16	588.73	589.05	589.78	589.00
13	588.26	590.28	590.45	586.12	569.73	558.13	575.72	590.16	588.24	588.58	589.97	589.11
14	588.91	590.03	590.28	585.63	569.31	557.60	575.82	589.84	588.35	588.60	589.77	589.37
15	588.68	589.81	590.54	585.69	568.97	557.23	576.55	589.63	588.50	588.61	589.68	589.86
16	588.55	589.61	590.84	585.54	568.60	557.37	576.55	589.43	588.18	588.70	590.02	589.81
17	588.21	589.70	590.63	584.74	568.62	556.91	576.02	589.67	587.80	588.78	590.31	589.58
18	588.05	589.99	590.17	584.44	568.16	558.87	576.10	590.19	587.14	588.97	590.50	590.13
19	587.72	589.89	589.61	584.71	567.65	560.12	576.30	591.04	587.26	589.07	589.93	590.22
20	588.35	589.74	589.05	585.10	567.21	560.84	577.35	590.74	587.03	589.12	589.98	590.28
21	588.97	589.67	588.62	584.22	566.77	561.97	578.43	590.41	587.33	589.20	589.68	590.71
22	588.79	590.16	588.35	583.50	566.37	563.75	578.73	590.02	587.60	589.29	589.32	591.70
23	588.42	590.33	588.61	582.85	565.95	565.19	579.21	589.66	587.53	590.08	589.25	591.87
24	589.82	590.58	588.28	582.17	566.12	566.42	579.97	589.88	587.53	590.00	589.35	591.09
25	590.82	591.24	589.34	581.48	565.54	567.50	580.34	590.06	587.63	589.89	589.19	590.57
26	590.77	592.99	589.50	581.41	564.63	568.35	581.40	590.03	587.70	590.00	588.99	590.33
27	590.73	593.89	590.18	581.57	564.31	569.34	582.15	589.93	587.77	590.11	588.83	590.08
28	590.86	592.99	589.89	580.84	564.03	570.62	582.96	589.90	587.83	590.84	589.00	590.40
29	590.61	592.28	589.91	580.09	563.48	572.15	583.73	589.70	587.86	590.45	588.97	590.26
30	590.32	591.63	590.27	579.11	---	573.94	584.46	589.82	588.05	590.45	589.13	589.83
31	589.99	---	589.84	578.16	---	573.50	---	589.95	---	590.80	589.95	---
MEAN	588.89	590.64	590.10	584.82	569.48	562.97	575.64	589.24	588.53	589.36	589.96	590.35
MAX	590.86	593.89	591.59	590.03	577.20	573.94	584.46	591.04	590.13	590.84	591.71	591.87
MIN	587.46	589.48	588.28	578.16	563.48	556.91	567.36	585.15	587.03	588.38	588.83	589.00
(†)	1504.6	1568.3	1499.2	1115.1	736.9	984.1	1311.0	1503.2	1436.0	1536.0	1503.2	1498.9
(‡)	+7.02	+24.6	-25.8	-143	-151	+92.3	+126	+71.8	-25.9	+37.3	-12.2	-1.66

CAL YR 1979 MEAN 587.17 MAX 593.89 MIN 567.42 ‡ +2.95
WTR YR 1980 MEAN 584.22 MAX 593.89 MIN 556.91 ‡ +0.41

† Contents, in millions of cubic feet, at end of month.
‡ Change in contents, equivalent in cubic feet per second.

04289000 LITTLE RIVER NEAR WATERBURY, VT

LOCATION.--Lat 44°22'12", long 72°46'11", Washington County, Hydrologic Unit 02010003, on right bank 1 mi (1.6 km) downstream from Waterbury Reservoir, 1.7 mi (2.7 km) upstream from mouth, and 2.5 mi (4.0 km) north of Waterbury.

DRAINAGE AREA.--111 mi^2 (287 km^2).

PERIOD OF RECORD.--July to October 1910 (gage heights only), October 1935 to current year. October, November 1935 monthly discharge only, published in WSP 1307. Prior to October 1962, published as Waterbury River near Waterbury.

REVISED RECORDS.--WSP 824: 1936.

GAGE.--Water-stage recorder. Concrete control since Dec. 8, 1937. Datum of gage is 428.00 ft (130.454 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). July 7 to Oct. 31, 1910, nonrecording gage at site 2 mi (3 km) upstream at different datum.

REMARKS.--Records good except those for periods of no gage-height record Feb. 13 to Mar. 24, Apr. 18 to June 4, which are poor. Flow completely regulated by Waterbury Reservoir (station 04288500). Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--45 years, 238 ft^3/s (6.740 m^3/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,520 ft^3/s (185 m^3/s) Mar. 18, 1936, gage height, 19.38 ft (5.907 m); minimum daily, 0.6 ft^3/s (0.017 m^3/s) several times during summers of 1938-39, 1941, and 1944. Maximum discharge since construction of Waterbury Reservoir in 1937, 4,080 ft^3/s (116 m^3/s) Dec. 9, 1937, gage height, 14.88 ft (4.535 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,320 ft^3/s (37.4 m^3/s) Nov. 27, gage height, 9.17 ft (2.795 m); minimum daily, 10 ft^3/s (0.28 m^3/s) May 1-4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	213	360	459	48	343	100	569	10	12	13	210	12
2	210	292	58	180	208	54	570	10	100	13	13	370
3	212	280	419	210	180	115	570	10	130	13	328	347
4	213	26	275	230	315	105	571	10	200	12	381	337
5	213	340	303	320	324	105	579	80	270	12	130	314
6	20	260	226	290	327	105	574	68	215	12	125	207
7	17	142	224	290	315	105	569	14	121	12	232	13
8	17	89	113	290	260	70	567	12	14	13	187	117
9	258	193	113	300	57	15	569	36	216	12	12	228
10	261	220	201	310	44	130	594	250	221	12	12	84
11	249	224	203	410	277	140	597	12	214	12	186	130
12	261	225	254	20	140	140	594	180	261	229	103	13
13	23	117	131	17	100	135	605	170	262	226	205	13
14	20	26	212	274	140	135	601	170	12	28	183	13
15	330	210	30	134	130	100	604	165	12	17	13	140
16	334	200	30	163	120	15	601	170	213	13	12	120
17	327	100	241	284	20	110	587	12	215	13	12	130
18	332	20	297	270	130	20	200	14	312	13	200	110
19	335	170	336	19	130	21	140	68	12	13	151	150
20	21	190	343	18	130	21	14	280	140	13	254	13
21	20	90	301	322	130	21	140	250	12	14	208	13
22	352	20	248	307	130	22	140	260	12	18	209	200
23	356	130	67	294	135	23	80	215	99	184	12	300
24	232	90	330	297	20	30	12	12	54	153	12	260
25	26	100	603	293	140	26	120	12	13	12	113	290
26	290	400	562	79	135	25	12	72	13	12	116	270
27	229	1190	94	20	140	28	36	72	13	13	119	150
28	141	930	290	288	145	31	12	56	13	272	90	13
29	296	683	100	295	140	32	12	115	13	98	96	200
30	294	607	20	332	---	59	12	14	13	24	12	253
31	294	---	270	352	---	558	---	12	---	190	12	---
TOTAL	6396	7924	7353	6956	4805	2596	10851	2831	3407	1691	3948	4810
MEAN	206	264	237	224	166	83.7	362	91.3	114	54.5	127	160
MAX	356	1190	603	410	343	558	605	280	312	272	381	370
MIN	17	20	20	17	20	15	12	10	12	12	12	12

CAL YR 1979 TOTAL 92443.0 MEAN 253 MAX 1190 MIN 8.4
WTR YR 1980 TOTAL 63568.0 MEAN 174 MAX 1190 MIN 10

04290500 WINOOSKI RIVER NEAR ESSEX JUNCTION, VT

LOCATION.--Lat 44°28'44", long 73°08'21", Chittenden County, Hydrologic Unit 02010003, on right bank 0.5 mi (0.8 km) downstream from Muddy Brook and 2 mi (3 km) southwest of Essex Junction.

DRAINAGE AREA.--1,044 mi^2 (2,704 km^2).

PERIOD OF RECORD.--Discharge: October 1928 to current year.
Water-quality records: Water years 1953, 1976-79.

REVISED RECORDS.--WSP 714: 1930(M). WSP 894: Drainage area. WSP 1307: 1929(M).

GAGE.--Water-stage recorder. Altitude of gage is 185 ft (56 m), from topographic map; prior to Oct. 1, 1964, datum was 1.00 ft (0.305 m) higher.

REMARKS.--Records good except those for winter period and period of no gage-height record, July 11 to Sept. 4, which are fair. Flow regulated by powerplants upstream, by Peacham Pond and Mollys Falls Reservoir, combined usable capacity, 492,000,000 ft^3 (13,900,000 m^3), by Waterbury Reservoir (station 04288500) since 1937, and by East Barre and Wrightsville Detention Reservoirs (Reservoirs in Winooski River basin) since 1935. See table with station 04286000 for monthend contents in Peacham Pond and Mollys Falls Reservoir. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--52 years, 1,695 ft^3/s (48.00 m^3/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 45,300 ft^3/s (1,280 m^3/s) Mar. 19, 1936, gage height, 24.54 ft (7.480 m), present datum, from rating curve extended above 27,000 ft^3/s (760 m^3/s) on basis of computations of flow over dam at gage heights 19.72 (6.011 m), 24.54 (7.480 m), and 51.4 ft (15.67 m) and slope-area measurement at gage height 51.4 ft (15.67 m), all at present datum; minimum daily, 24 ft^3/s (0.68 m^3/s) Sept. 7, 1968.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1830, 113,000 ft^3/s (3,200 m^3/s) Nov. 4, 1927, gage height, 51.4 ft (15.67 m), present datum, from floodmarks, from rating curve extended above 27,000 ft^3/s (760 m^3/s) by method explained above.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 12,500 ft^3/s (354 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Nov. 27	1030	*11,700	331	8.79	2.679						

Minimum daily discharge, 116 ft^3/s (3.29 m^3/s) Sept. 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	553	1020	2240	897	900	540	3220	1670	367	458	720	1200
2	470	1120	1780	1190	840	480	3060	1560	938	478	700	1180
3	651	1790	1470	1130	740	560	2690	1360	997	410	610	1150
4	660	2200	1380	779	780	460	2530	1350	1210	360	820	1030
5	650	1830	1070	929	780	490	3600	1190	1880	320	620	900
6	1320	1560	1530	989	740	390	2990	1150	1520	200	610	442
7	1010	1290	1210	888	890	440	2420	2110	944	300	610	330
8	668	1020	1260	1070	750	400	2470	3300	529	451	640	487
9	814	1140	950	963	600	340	2510	2460	1030	239	410	415
10	966	1170	1000	1080	120	500	7500	2340	1090	310	300	395
11	996	1140	1070	949	680	480	8570	1790	846	290	150	248
12	960	1070	1140	1790	600	550	5480	1620	1030	230	440	443
13	1550	997	1190	2260	620	560	6040	1560	870	560	520	302
14	1680	1080	1190	1230	640	490	4930	1500	382	530	620	116
15	1550	792	777	1590	520	460	4800	1490	494	340	490	770
16	1600	1050	481	1780	470	450	4970	1340	708	250	360	727
17	1550	846	1060	1290	410	400	3670	1010	696	310	400	752
18	1500	686	791	1180	500	3000	2890	912	675	270	420	906
19	1450	905	764	1030	580	7620	2340	1380	684	360	410	1060
20	1250	804	872	840	560	2630	2060	1760	351	250	520	803
21	1000	992	1020	680	540	2470	2360	1450	384	180	540	171
22	1030	634	920	720	600	3450	2230	1270	521	300	490	1060
23	1150	1210	763	950	550	3610	1860	1190	333	950	360	1020
24	1270	1020	1020	1020	560	3100	1570	893	516	1100	210	1460
25	1730	1020	2300	910	500	3020	1430	689	516	610	230	982
26	1440	1950	6190	840	530	2450	1690	741	194	390	320	1090
27	1470	9210	3220	450	560	1980	1800	672	462	490	340	1270
28	797	5270	2010	710	570	2360	1700	829	238	620	460	808
29	1060	3420	1860	760	600	3120	1630	280	163	640	420	718
30	1050	2730	1460	820	---	4050	1500	432	240	600	300	654
31	1240	---	1020	820	---	3830	---	514	---	640	460	---
TOTAL	35085	50966	45008	32534	17730	54680	96510	41812	20808	13436	14500	22889
MEAN	1132	1699	1452	1049	611	1764	3217	1349	694	433	468	763
MAX	1730	9210	6190	2260	900	7620	8570	3300	1880	1100	820	1460
MIN	470	634	481	450	120	340	1430	280	163	180	150	116

CAL YR 1979 TOTAL 654849 MEAN 1794 MAX 13000 MIN 53
WTR YR 1980 TOTAL 445958 MEAN 1218 MAX 9210 MIN 116

04292000 LAMOILLE RIVER AT JOHNSON, VT

LOCATION.--Lat 44°37'22", long 72°40'50", Lamoille County, Hydrologic Unit 02010005, on right bank above falls, 0.7 mi (1.1 km) upstream from bridge in Johnson and 0.8 mi (1.3 km) upstream from Gihon River.

DRAINAGE AREA.--310 mi^2 (803 km^2).

PERIOD OF RECORD.--Discharge: July to December 1910, June 1911 to December 1913 (monthly discharge only, January to March 1912, Feburary 1913), September 1928 to current year.
Water-quality records: Water year 1953.

REVISIED RECORDS.--WSP 894: Drainage area. WSP 1114: 1933, 1934(M). WSP 1237: 1912(M), 1930, 1932(M).

GAGE.--Water-stage recorder. Altitude of gage is 495 ft (151 m), from topographic map. Prior to Dec. 31, 1913, nonrecording gage at bridge 0.7 mi (1.1 km) downstream at different datum.

REMARKS.--Records good except those for winter period, which are fair. Some regulation by powerplant upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--54 years (water years 1912-13, 1929-80), 533 ft^3/s (15.09 m^3/s), 23.35 in/yr (593 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,400 ft^3/s (408 m^3/s) July 1, 1973, gage height, 17.33 ft (5.282 m), from rating curve extended above 8,500 ft^3/s (240 m^3/s) on basis of computation of flow over dam at gage height 16.48 ft (5.023 m); minimum, 11 ft^3/s (0.31 m^3/s) Sept. 2, 1935; minimum daily, 16 ft^3/s (0.45 m^3/s) Oct. 26, 1947.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 5,400 ft^3/s (150 m^3/s) and maximum (*):

Date	Time	Discharge		Gage height		Date	Time	Discharge		Gage height	
		(ft^3/s)	(m^3/s)	(ft)	(m)			(ft^3/s)	(m^3/s)	(ft)	(m)
Nov. 27	0530	*5320	151	10.50	3.200						

Minimum discharge, 22 ft^3/s (0.62 m^3/s) July 16; minimum daily, 60 ft^3/s (1.70 m^3/s) July 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	80	349	328	110	240	72	1100	567	143	289	562	661
2	113	308	440	250	220	70	1000	509	143	283	1600	1100
3	175	853	402	320	235	70	860	367	165	183	758	858
4	197	964	408	300	255	66	802	363	376	220	424	483
5	164	663	399	230	230	72	1050	403	823	212	314	239
6	267	548	404	155	240	69	885	353	566	213	158	114
7	285	364	431	140	230	72	710	663	354	191	158	85
8	247	359	467	125	220	76	681	895	192	155	153	78
9	225	353	447	190	250	78	763	672	185	85	155	78
10	221	428	376	255	255	80	2680	643	252	112	150	94
11	297	452	372	240	240	80	2820	603	305	114	132	129
12	416	385	402	720	230	80	1680	464	203	102	143	171
13	666	356	487	1160	210	78	2430	341	198	92	230	147
14	568	351	413	670	195	74	1450	338	164	108	221	171
15	385	347	280	520	190	79	1400	332	140	111	252	679
16	399	288	270	680	210	84	1390	298	163	99	300	595
17	312	225	290	390	210	85	903	211	202	168	223	352
18	261	245	340	250	220	450	695	236	194	125	179	526
19	249	270	200	235	225	1750	552	653	187	165	158	667
20	260	286	145	230	130	1450	523	663	257	73	162	395
21	262	306	130	280	98	1200	749	472	375	60	152	254
22	352	318	210	210	86	970	647	340	327	94	142	914
23	369	369	240	170	79	1050	459	298	180	588	113	806
24	829	370	400	180	78	1050	310	204	179	530	100	709
25	976	416	1600	250	78	950	478	204	177	352	100	501
26	647	1090	1840	230	75	790	584	202	201	177	100	386
27	470	3400	1000	210	78	800	660	201	181	337	96	507
28	352	1430	720	190	76	1050	631	190	109	907	119	485
29	213	883	650	175	75	1300	577	141	108	342	158	368
30	396	584	570	195	---	1800	481	139	124	116	141	347
31	454	---	350	225	---	1510	---	139	---	246	178	---
TOTAL	11107	17560	15011	9485	5158	17405	29950	12104	7173	6849	7831	12899
MEAN	358	585	484	306	178	561	998	390	239	221	253	430
MAX	976	3400	1840	1160	255	1800	2820	895	823	907	1600	1100
MIN	80	225	130	110	75	66	310	139	108	60	96	78
CFSM	1.16	1.89	1.56	.99	.57	1.81	3.22	1.26	.77	.71	.82	1.39
IN.	1.33	2.11	1.80	1.14	.62	2.09	3.59	1.45	.86	.82	.94	1.55

CAL YR 1979 TOTAL 216030 MEAN 592 MAX 6380 MIN 80 CFSM 1.91 IN 25.92
WTR YR 1980 TOTAL 152532 MEAN 417 MAX 3400 MIN 60 CFSM 1.35 IN 18.30

04292500 LAMOILLE RIVER AT EAST GEORGIA, VT

LOCATION.--Lat 44°40'45", long 73°04'23", Franklin County, Hydrologic Unit 02010005, on right bank at East Georgia, 0.5 mi (0.8 km) upstream from railroad bridge, and 1 mi (1.6 km) downstream from Beaver Meadow Brook.

DRAINAGE AREA.--686 mi^2 (1,777 km^2).

PERIOD OF RECORD.--Discharge: August 1929 to current year. Prior to October 1937, published as "near Milton." Water-quality records: Water years 1955, 1967-74.

REVISED RECORDS.--WSP 894: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 285 ft (86.9 m), from topographic map. Prior to Dec. 1, 1937, at site 3.5 mi (5.6 km) downstream at different datum.

REMARKS.--Records good except those for winter period, which are poor. Low flow regulated by powerplants upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--51 years, 1,229 ft^3/s (34.81 m^3/s), 24.33 in/yr (618 mm/yr), adjusted to present drainage area.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,200 ft^3/s (657 m^3/s) Mar. 19, 1936, gage height, 12.52 ft (3.816 m), site and datum then in use, by computation of peak flow over dam; maximum gage height, 21.64 ft (6.596 m) Mar. 6, 1979, ice jam; minimum daily discharge, 74 ft^3/s (2.10 m^3/s) Sept. 26, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,070 ft^3/s (229 m^3/s) Nov. 27, gage height, 8.28 ft (2.524 m), no peak above base of 104,000 ft^3/s (295 m^3/s); maximum gage height, 12.33 ft (3.76 m) Dec. 26, ice jam; minimum discharge, 140 ft^3/s (3.96 m^3/s) Mar. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	322	809	1350	600	480	145	2700	1150	342	807	768	1500
2	268	872	1160	300	540	150	2360	1150	422	757	2680	2600
3	282	2240	1100	700	510	160	2040	950	290	640	1960	2000
4	354	2730	1030	860	540	140	1990	856	576	580	1140	1200
5	420	1730	975	580	580	145	2920	789	1290	438	818	740
6	562	1310	964	450	540	155	2450	803	1140	403	630	566
7	810	1100	1080	350	500	160	1790	1360	759	489	556	327
8	701	949	1140	300	480	170	1730	1770	622	374	425	356
9	695	919	875	340	520	180	1890	1510	500	348	405	278
10	726	999	869	500	470	180	3870	1330	529	270	390	279
11	678	1090	925	600	450	180	6440	1210	564	227	320	309
12	708	976	1040	1000	450	180	4360	1130	567	245	340	322
13	1160	856	1140	2600	430	180	5080	894	452	337	550	349
14	1450	823	1030	1900	380	175	4000	767	371	163	540	436
15	1140	837	650	1200	350	170	3410	746	330	255	600	1610
16	1140	822	660	1600	430	190	3770	726	294	253	700	1380
17	992	737	700	1400	350	280	2550	687	374	235	580	970
18	804	722	790	700	410	1200	1910	534	379	545	450	1530
19	827	721	620	600	340	3800	1560	1010	348	323	380	1620
20	760	715	430	540	300	3600	1350	1480	344	336	390	1150
21	878	811	350	620	260	3100	1830	1120	467	259	380	811
22	972	878	340	450	230	2700	1690	794	775	286	340	1180
23	947	1040	540	470	210	2300	1360	696	621	615	300	2030
24	1160	988	800	500	190	2500	1070	651	350	1240	250	1530
25	2350	1190	3100	520	180	2300	1020	421	344	833	250	1170
26	1530	2200	4500	530	170	2100	1320	478	341	627	190	1030
27	1240	7280	2700	550	160	2000	1390	406	341	390	230	1240
28	905	4810	1650	560	155	2200	1360	429	298	862	280	1210
29	810	2570	1400	530	150	2800	1270	435	242	920	380	931
30	736	1850	1350	470	---	3600	1140	277	177	877	350	787
31	991	---	1000	450	---	3500	---	296	---	845	400	---
TOTAL	27318	45574	36258	22770	10755	40640	71620	26855	14449	15779	17972	31441
MEAN	881	1519	1170	735	371	1311	2387	866	482	509	580	1048
MAX	2350	7280	4500	2600	580	3800	6440	1770	1290	1240	2680	2600
MIN	268	715	340	300	150	140	1020	277	177	163	190	278
CFSM	1.28	2.21	1.71	1.07	.54	1.91	3.48	1.26	.70	.74	.85	1.53
IN.	1.48	2.47	1.97	1.23	.58	2.20	3.88	1.46	.78	.86	.97	1.70

CAL YR 1979 TOTAL 485201 MEAN 1329 MAX 11800 MIN 166 CFSM 1.94 IN 26.31

WTR YR 1980 TOTAL 361431 MEAN 988 MAX 7280 MIN 140 CFSM 1.44 IN 19.60

04293000 MISSISQUOI RIVER NEAR NORTH TROY, VT

LOCATION.--Lat 44°58'22", long 72°23'15", Orleans County, Hydrologic Unit 02010007, on right bank 200 ft (60 m) upstream from Big Falls, 1.5 mi (2.4 km) downstream from Jay Branch, and 2.2 mi (3.5 km) upstream from North Troy.

DRAINAGE AREA.--131 mi^2 (339 km^2).

PERIOD OF RECORD.--August 1931 to current year.

REVISED RECORDS.--WSP 924: 1940. WSP 1114: 1933(M), 1936-39.

GAGE.--Water-stage recorder. Altitude of gage is 580 ft (177 m), from topographic map.

REMARKS.--Records good except those for winter period and period of no gage-height record, July 24 to Sept. 10, which are fair. Occasional regulation at low flow caused by small powerplant upstream; greater regulation prior to 1967. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--49 years, 270 ft^3/s (7.646 m^3/s), 27.99 in/yr (711 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,980 ft^3/s (226 m^3/s) May 3, 1940, gage height, 12.87 ft (3.923 m), from rating curve extended above 5,500 ft^3/s (160 m^3/s) on basis of computation of flow over dam at gage height 11.70 ft (3.566 m); minimum, 9.4 ft^3/s (0.27 m^3/s) Aug. 28, 1949; minimum daily, 11 ft^3/s (0.31 m^3/s) Aug. 28, 1949, Aug. 30, 1953.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,210 ft^3/s (62.6 m^3/s) Nov. 27, gage height, 6.79 ft (2.07 m); no peak discharge above base of 3,300 ft^3/s (93 m^3/s); maximum gage height, 6.99 ft (2.13 m) Dec. 25, (ice jam); minimum discharge not determined; minimum daily, 27 ft^3/s (0.76 m^3/s) Mar. 4 and Aug. 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	46	147	224	120	48	29	565	332	90	44	80	190
2	49	184	183	110	46	28	554	281	97	76	62	330
3	37	681	163	90	42	28	495	235	95	102	56	280
4	42	482	164	84	40	27	451	197	430	72	58	170
5	43	269	154	78	38	28	651	178	498	46	56	120
6	111	202	204	76	37	29	408	231	195	73	52	80
7	105	169	318	74	36	30	337	461	128	75	54	60
8	96	153	214	76	35	33	432	387	112	57	70	50
9	130	143	172	76	34	32	606	281	164	57	96	47
10	114	311	166	74	34	35	1460	245	145	62	88	46
11	113	272	204	74	33	42	1330	200	142	44	72	63
12	120	187	547	330	33	37	939	177	119	51	98	72
13	321	163	353	280	32	32	1600	150	93	45	120	81
14	327	138	191	185	31	35	710	140	81	38	105	129
15	205	118	144	280	31	35	936	129	68	35	105	399
16	217	127	170	260	30	35	785	119	56	48	94	184
17	162	131	151	155	31	40	433	95	76	60	90	110
18	201	170	92	110	31	340	334	134	49	75	80	341
19	190	146	88	105	30	580	271	547	51	58	68	218
20	221	129	84	105	31	520	286	304	59	35	62	129
21	300	224	78	84	32	430	501	186	94	50	58	113
22	350	193	96	70	34	540	340	144	120	65	52	110
23	230	228	120	68	32	580	268	124	87	90	43	202
24	590	184	330	68	31	470	256	89	69	160	37	189
25	649	227	1650	64	32	400	270	94	51	120	32	123
26	313	309	1130	60	31	360	422	74	39	90	29	150
27	220	1720	435	58	31	380	455	78	38	72	27	450
28	177	576	250	58	30	570	359	68	38	110	30	320
29	191	353	230	56	29	760	331	61	48	120	29	200
30	198	272	155	54	---	983	424	62	45	110	29	150
31	167	---	130	52	---	837	---	57	---	98	80	---
TOTAL	6235	8608	8590	3434	985	8305	17209	5860	3377	2238	2012	5106
MEAN	201	287	277	111	34.0	268	574	189	113	72.2	64.9	170
MAX	649	1720	1650	330	48	983	1600	547	498	160	120	450
MIN	37	118	78	52	29	27	256	57	38	35	27	46
CFSM	1.53	2.19	2.12	.85	.26	2.05	4.38	1.44	.86	.55	.50	1.30
IN.	1.77	2.44	2.44	.98	.28	2.36	4.89	1.66	.96	.64	.57	1.45

CAL YR 1979 TOTAL 105327 MEAN 289 MAX 3400 MIN 21 CFSM 2.21 IN 29.91
WTR YR 1980 TOTAL 71959 MEAN 197 MAX 1720 MIN 27 CFSM 1.50 IN 20.43

04293500 MISSISQUOI RIVER NEAR EAST BERKSHIRE, VT

LOCATION.--Lat 44°57'30", long 72°41'55", Franklin County, Hydrologic Unit 02010007, on left bank 1.7 mi (2.7 km) north of intersection of State Highways 105 and 118 in East Berkshire, 1.7 mi (2.7 km) upstream from Trout River, 3 mi (5 km) south of Richford, and 3.8 mi (6.1 km) downstream from North Branch.

DRAINAGE AREA.--479 mi^2 (1,241 km^2).

PERIOD OF RECORD.--Discharge: July 1911 to September 1923, October 1928 to current year. Monthly discharge only for some periods, published in WSP 1307. Prior to October 1977, published as "near Richford."

Water-quality records: Water years 1954, 1967-74.

REVISED RECORDS.--WSP 784: Drainage area. WSP 1237: 1913-14(M), 1922(M), 1923, 1929-30. WSP 1307: 1916(M). WSP 1437: 1912.

GAGE.--Water-stage recorder. Altitude of gage is 410 ft (125 m), from topographic map. Prior to Aug. 1, 1915, nonrecording gage at site 0.2 mi (0.3 km) downstream at datum 4.35 ft (1.326 m) lower. Aug. 1, 1915, to Sept. 30, 1923, water-stage recorder at present site and datum. Oct. 1, 1928, to Sept. 30, 1929, nonrecording gage at former site at datum 4.6 ft (1.40 m) lower.

REMARKS.--Records good except those for winter period, which are fair. Diurnal fluctuation at low flow prior to 1934. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--64 years, 922 ft^3/s (26.11 m^3/s), 26.14 in/yr (664 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,200 ft^3/s (487 m^3/s) May 4, 1940, gage height, 15.15 ft (4.618 m), from rating curve extended above 9,300 ft^3/s (260 m^3/s) on basis of computation of peak flow over dam at gage height 14.70 ft (4.481 m), slope-area measurement at gage height 12.90 ft (3.932 m), and study of discharge per foot of width at measuring section; maximum gage height, 18.92 ft (5.767 m) Mar. 15, 1946, ice jam; minimum discharge observed, 8 ft^3/s (0.23 m^3/s) July 14, 1911.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1830, 45,000 ft^3/s (1,270 m^3/s) during flood of November 1927, gage height, 23.1 ft (7.04 m), from floodmarks, from rating curve extended above 9,300 ft^3/s (260 m^3/s) as explained above.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,930 ft^3/s (140 m^3/s) Nov. 27, gage height, 8.18 ft (2.493 m), no peak above base of 7,600 ft^3/s (220 m^3/s); maximum gage height, 11.77 ft (3.587 m) Mar. 23, ice jam; minimum discharge, 86 ft^3/s (2.44 m^3/s) July 21; minimum daily, 90 ft^3/s (2.55 m^3/s) July 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	128	573	1070	380	170	100	1860	1280	215	174	254	406
2	129	744	890	340	160	98	1540	1090	265	158	233	956
3	131	1610	740	310	150	96	1450	916	311	192	206	1010
4	117	1670	695	280	140	96	1410	766	799	184	211	848
5	115	1170	640	270	130	94	2190	665	1210	149	214	625
6	364	879	645	260	125	98	1870	758	705	142	185	404
7	292	729	965	260	120	105	1380	1380	410	149	200	283
8	284	663	1080	270	120	110	1370	1350	361	137	210	242
9	353	590	810	270	115	110	1520	1100	463	126	353	179
10	393	843	740	260	110	120	2440	1030	492	111	323	174
11	402	1080	800	250	110	140	3280	922	478	116	247	160
12	396	819	1230	950	105	125	2730	797	400	103	328	300
13	608	675	1450	1000	100	110	4110	670	320	102	439	350
14	875	598	1000	700	100	115	3170	598	241	103	374	660
15	703	544	520	940	105	120	2470	558	209	98	384	1300
16	685	509	560	880	105	120	2560	499	187	92	331	850
17	587	482	490	540	105	130	1660	437	170	101	334	380
18	588	617	390	420	105	1700	1330	401	169	121	285	1100
19	595	572	320	370	100	2100	1120	1160	146	122	243	900
20	610	548	290	340	105	1500	1000	1170	144	109	229	470
21	828	744	280	290	110	1600	1320	811	203	90	214	390
22	942	773	270	250	115	1700	1210	617	260	131	187	360
23	777	856	270	240	110	1900	982	471	218	219	157	660
24	1160	781	1400	230	105	2100	887	386	174	605	136	640
25	1780	919	4200	220	105	1600	875	316	146	399	119	420
26	1250	1030	4000	210	105	1400	1080	278	121	299	104	470
27	953	4160	2500	205	105	1350	1480	231	123	256	99	560
28	755	3100	1300	195	105	1400	1350	214	126	257	110	660
29	720	1680	850	190	105	1800	1220	195	143	347	107	520
30	736	1310	620	180	---	2500	1340	176	151	368	101	410
31	656	---	450	175	---	2700	---	176	---	364	140	---
TOTAL	18912	31268	31465	11675	3345	27237	52204	21418	9360	5924	7057	16687
MEAN	610	1042	1015	377	115	879	1740	691	312	191	228	556
MAX	1780	4160	4200	1000	170	2700	4110	1380	1210	605	439	1300
MIN	115	482	270	175	100	94	875	176	121	90	99	160
CFSM	1.27	2.18	2.12	.79	.24	1.84	3.63	1.44	.65	.40	.48	1.16
IN.	1.47	2.43	2.44	.91	.26	2.12	4.05	1.66	.73	.46	.55	1.30

CAL YR 1979 TOTAL 358584 MEAN 982 MAX 9440 MIN 73 CFSM 2.05 IN 27.85
WTR YR 1980 TOTAL 236552 MEAN 646 MAX 4200 MIN 90 CFSM 1.35 IN 18.37

04294500 LAKE CHAMPLAIN AT BURLINGTON, VT

LOCATION.--Lat 44°28'52", long 73°13'27", Chittenden County, Hydrologic Unit 02010003, 50 ft (15 m) south of Gulf Oil Co. dock at Burlington, 0.1 mi (0.2 km) north of Burlington Water Department pumping station, and 0.5 mi (0.8 km) north of railroad station.

PERIOD OF RECORD.--Gage heights: May 1907 to current year.
Water-quality records: Water year 1971.

REVISED RECORDS.--WSP 684: 1912-29 (datum correction). WSP 1207: 1938 (datum correction).

GAGE.--Water-stage recorder. Datum of gage is 92.86 ft (28.304 m) National Geodetic Vertical Datum of 1929. Prior to July 20, 1937, nonrecording gage at site 0.7 mi (1.1 km) south, and July 20, 1937, to Sept. 7, 1939, nonrecording gage at site 0.1 mi (0.2 km) south, both at present datum.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 8.80 ft (2.682 m) Apr. 4, 1976; minimum observed, -0.25 ft (-0.076 m) Dec. 4, 1908.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 4.49 ft (1.369 m) Apr. 19, affected by seiche; minimum, 1.24 ft (0.378 m) Mar. 11.

MEAN GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.53	2.32	3.23	3.16	2.28	1.44	3.05	4.29	2.98	2.16	2.06	1.95
2	2.53	2.31	3.28	3.12	2.25	1.41	3.08	4.26	2.95	2.16	2.07	2.03
3	2.50	2.41	3.21	3.11	2.21	1.39	3.14	4.23	2.93	2.16	2.10	2.08
4	2.47	2.45	3.19	3.05	2.17	1.36	3.18	4.18	2.91	2.14	2.10	2.12
5	2.45	2.49	3.13	3.01	2.14	1.34	3.28	4.13	2.91	2.11	2.12	2.07
6	2.46	2.48	3.10	2.97	2.10	1.33	3.38	4.07	2.91	2.09	2.13	2.06
7	2.45	2.50	3.14	2.84	2.07	1.31	3.39	4.06	2.89	2.06	2.14	2.09
8	2.44	2.48	3.09	2.85	2.04	1.31	3.37	4.05	2.86	2.04	2.15	2.07
9	2.48	2.48	3.05	2.82	2.00	1.31	3.45	4.04	2.82	2.04	2.13	2.00
10	2.48	2.49	3.02	2.78	1.97	1.28	3.57	4.01	2.80	2.01	2.12	1.96
11	2.42	2.53	2.96	2.67	1.92	1.30	3.77	3.96	2.76	2.00	2.09	1.92
12	2.39	2.54	2.96	2.73	1.90	1.30	3.91	3.94	2.73	1.97	2.08	1.90
13	2.38	2.54	2.98	2.72	1.86	1.29	4.02	3.91	2.68	1.97	2.09	1.91
14	2.40	2.55	2.96	2.69	1.83	1.34	4.16	3.86	2.64	1.95	2.09	1.92
15	2.40	2.51	2.89	2.76	1.81	1.35	4.26	3.82	2.63	1.91	2.07	1.92
16	2.42	2.49	2.78	2.77	1.79	1.32	4.39	3.76	2.58	1.90	2.06	1.93
17	2.41	2.45	2.83	2.73	1.77	1.28	4.46	3.72	2.55	1.90	2.08	1.81
18	2.42	2.46	2.80	2.71	1.72	1.40	4.47	3.62	2.52	1.90	2.05	1.88
19	2.38	2.45	2.77	2.72	1.67	1.63	4.48	3.61	2.51	1.87	2.01	1.91
20	2.34	2.40	2.72	2.70	1.66	1.77	4.43	3.62	2.46	1.85	2.03	1.90
21	2.38	2.42	2.64	2.66	1.64	1.88	4.44	3.58	2.45	1.87	2.04	1.91
22	2.41	2.35	2.63	2.61	1.61	2.04	4.45	3.54	2.39	1.90	2.00	1.95
23	2.41	2.37	2.61	2.59	1.60	2.18	4.44	3.52	2.37	1.94	1.99	1.98
24	2.43	2.37	2.62	2.57	1.58	2.30	4.39	3.46	2.34	1.95	1.97	2.00
25	2.42	2.41	2.73	2.54	1.55	2.42	4.35	3.41	2.32	1.96	1.94	1.96
26	2.44	2.44	2.94	2.50	1.53	2.54	4.33	3.33	2.29	1.96	1.92	1.95
27	2.44	2.74	3.11	2.46	1.49	2.61	4.32	3.27	2.26	1.99	1.91	1.96
28	2.41	3.01	3.18	2.43	1.49	2.66	4.29	3.21	2.22	1.97	1.95	1.98
29	2.42	3.14	3.20	2.39	1.47	2.74	4.30	3.15	2.18	1.95	1.94	1.96
30	2.41	3.22	3.21	2.36	---	2.87	4.30	3.08	2.17	2.02	1.91	1.90
31	2.40	---	3.19	2.31	---	2.97	---	3.00	---	2.07	1.89	---
MEAN	2.43	2.53	2.97	2.72	1.83	1.76	3.96	3.73	2.60	1.99	2.04	1.97
MAX	2.53	3.22	3.28	3.16	2.28	2.97	4.48	4.29	2.98	2.16	2.15	2.12
MIN	2.34	2.31	2.61	2.31	1.47	1.28	3.05	3.00	2.17	1.85	1.89	1.81

CAL YR 1979 MEAN 3.50 MAX 7.00 MIN 1.17
WTR YR 1980 MEAN 2.55 MAX 4.48 MIN 1.28

04295000 RICHELIEU RIVER (LAKE CHAMPLAIN) AT ROUSES POINT, NY
(National stream-quality accounting network station)
(National pesticide network station)

LOCATION.--Lat 44°59'46", long 73°21'37", Clinton County, Hydrologic Unit 02010006, on left bank at outlet of Lake Champlain in Rouses Point, and 1.0 mi (1.6 km) south of Fort Montgomery ruins. Water-quality sampling site at stage station.

DRAINAGE AREA.--8,277 mi² (21,437 km²).

WATER-STAGE RECORDS

PERIOD OF RECORD.--October 1863 to December 1870 (maximum and minimum monthly gage heights at St. Johns, Quebec, published in WSP 97) and March 1871 to current year (daily gage heights prior to October 1970, elevations thereafter: those for 1871-1907 published in WSP 894). Gage heights prior to Oct. 1, 1925, published as "Richelieu River at Fort Montgomery, Rouses Point." Discharge records for January 1875 to September 1916 at "Chambly, Quebec," published in WSP 65, 82, 97, 129, 170, 206, 424, and 1307 have been found to be unreliable and should not be used. Daily discharge record for "Richelieu River at Fryers Rapids, Quebec," published in Water Survey of Canada annual reports.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. March 1871 to May 1923, nonrecording gage located in Fort Montgomery and May 1923 to October 1938, nonrecording gage at present site. Prior to October 1970, at datum 93.00 ft (28.346 m) higher.

REMARKS.--Area of lake surface about 490 mi² (1,269 km²). Total volume below 92.5 ft (28.19 m) elevation, reported by Lake Champlain Studies Center, 902.2 bil ft³ (25,600 hm³).

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 101.80 ft (31.029 m) Mar. 30, 1903; minimum observed, 92.17 ft (28.093 m) Oct. 23, 1941.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum elevation known since at least 1827, 102.1 ft (31.12 m) May 4, 1869, from marks at railroad bridge near present gage, according to data published on p. 428 of the Report of the Board of Engineers on Deep Waterways, 1900: U.S. 56th Cong., 2d sess. H. Doc. 149.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 97.55 ft (29.73 m) Apr. 20, minimum, 94.06 ft (28.67 m) Mar. 11 and 12.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	95.44	95.50	96.09	96.00	95.11	94.28	95.88	97.11	95.86	95.04	94.97	94.89
2	95.36	95.27	96.03	95.93	95.07	94.26	95.96	97.10	95.82	95.05	94.96	94.94
3	95.36	95.24	96.21	95.88	95.04	94.25	95.97	97.06	95.78	95.04	95.00	94.91
4	95.34	95.31	96.11	95.90	95.00	94.22	96.04	96.95	95.72	95.01	94.99	94.95
5	95.37	95.35	96.31	95.78	94.98	94.21	96.13	96.94	95.74	95.04	95.00	95.17
6	95.47	95.42	96.11	95.80	94.94	94.18	96.19	96.91	95.80	94.80	95.08	94.97
7	95.42	95.34	96.03	96.02	94.90	94.16	96.35	96.95	95.80	94.89	95.04	94.90
8	95.27	95.49	95.94	95.73	94.88	94.14	96.38	96.90	95.76	94.99	95.03	94.82
9	95.25	95.31	96.05	95.65	94.84	94.17	96.34	96.92	95.70	94.88	94.94	95.01
10	95.29	95.40	95.81	95.66	94.80	94.17	96.42	96.89	95.66	94.90	94.94	94.87
11	95.40	95.35	96.03	95.93	94.78	94.15	96.64	96.96	95.62	94.86	94.95	94.85
12	95.41	95.35	95.78	95.57	94.74	94.13	96.80	96.77	95.60	94.79	94.97	94.73
13	95.33	95.36	95.73	95.72	94.71	94.14	96.88	96.76	95.62	94.77	94.93	94.74
14	95.22	95.32	95.76	95.69	94.68	94.16	97.06	96.71	95.54	94.81	94.99	94.78
15	95.27	95.43	96.03	95.52	94.64	94.16	97.14	96.69	95.43	94.86	94.97	94.73
16	95.24	95.27	95.95	95.55	94.61	94.17	97.18	96.62	95.41	94.77	94.83	94.95
17	95.28	95.37	95.48	95.63	94.60	94.19	97.28	96.57	95.42	94.75	94.86	95.13
18	95.23	95.26	95.59	95.62	94.59	94.24	97.34	96.76	95.39	94.75	94.92	94.72
19	95.42	95.27	95.58	95.54	94.55	94.47	97.32	96.43	95.34	94.79	94.97	94.79
20	95.39	95.35	95.57	95.48	94.50	94.63	97.34	96.45	95.40	94.75	94.92	94.94
21	95.33	95.23	95.63	95.46	94.45	94.74	97.24	96.49	95.28	94.72	94.90	94.78
22	95.30	95.39	95.53	95.52	94.47	94.84	97.20	96.41	95.28	94.78	94.88	94.81
23	95.35	95.31	95.49	95.45	94.44	95.02	97.18	96.35	95.26	94.81	94.84	94.76
24	95.27	95.30	95.45	95.39	94.44	95.14	97.21	96.31	95.24	94.81	94.82	94.80
25	95.27	95.23	95.52	95.38	94.39	95.26	97.19	96.15	95.21	94.86	94.82	95.01
26	95.28	95.36	95.75	95.33	94.35	95.37	97.17	96.14	95.19	94.83	94.82	94.89
27	95.27	95.66	95.89	95.30	94.37	95.45	97.15	96.07	95.07	94.84	94.78	94.83
28	95.39	95.99	95.97	95.27	94.32	95.51	97.16	96.04	95.08	94.95	94.74	94.77
29	95.23	96.01	96.00	95.22	94.30	95.58	97.13	96.00	95.10	94.97	94.74	94.94
30	95.24	96.08	95.96	95.19	---	95.67	97.14	96.02	95.04	94.94	94.83	94.93
31	95.25	---	96.03	95.14	---	95.79	---	96.02	---	94.94	94.86	---
MEAN	95.32	95.42	95.85	95.59	94.67	94.61	96.81	96.60	95.47	94.87	94.91	94.88
MAX	95.47	96.08	96.31	96.02	95.11	95.79	97.34	97.11	95.86	95.05	95.08	95.17
MIN	95.22	95.23	95.45	95.14	94.30	94.13	95.88	96.00	95.04	94.72	94.74	94.72

CAL YR 1979 MEAN 96.37 MAX 99.92 MIN 94.12
WTR YR 1980 MEAN 95.42 MAX 97.34 MIN 94.13

04295000 RICHELIEU RIVER (LAKE CHAMPLAIN) AT ROUSES POINT, NY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1966-67, 1969-72, 1974 to current year.
CHEMICAL DATA: 1966-67 (a), 1969 (b), 1970 (c), 1971-72 (b), 1974-80 (c).
MINOR ELEMENTS DATA: 1974-80 (b).
PESTICIDE DATA: 1976-79 (b), 1980 (a).
ORGANIC DATA: OC--1974 (a), 1975-77 (b), 1978 (a), 1979-80 (c).
PCB--1978-79 (b), 1980 (a).
NUTRIENT DATA: 1970 (c), 1971-72 (b), 1974 (b), 1975-80 (c).
BIOLOGICAL DATA:
Bacteria--1974 (a), 1975-80 (c).
Phytoplankton--1974 (a), 1975-78 (c), 1979 (b), 1980 (c).
Periphyton--1975 (c), 1976-80 (b).
SEDIMENT DATA: 1975-80 (c)

COOPERATION.--Pesticide samples were collected by the U.S. Geological Survey and were analyzed by the U.S. Environmental Protection Agency.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE, WATER (DEG C)	TURBIDITY (NTU)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)
OCT 01...	1300	138	7.8	14.0	1.0	10.0	96	K8	K3	59	14
NOV 05...	1300	145	7.5	7.0	1.0	11.4	94	42	K2	56	17
APR 21...	1030	144	7.9	5.5	.40	12.5	99	K8	K2	59	18
MAY 12...	1130	143	7.8	10.0	.55	8.2	75	K5	<1	56	16
JUN 09...	1300	145	7.3	14.0	.30	8.7	89	<1	<1	53	11
JUL 14...	1200	150	7.3	20.0	.50	8.2	93	K1	<1	56	14
AUG 12...	1300	135	7.6	23.5	.60	7.6	92	23	K5	56	10
SEP 08...	1200	141	7.4	20.5	.20	8.0	91	K12	--	59	20

DATE	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)
OCT 01...	17	4.1	5.3	1.1	45	13	7.5	.1	.8	80	76
NOV 05...	16	3.8	5.4	1.2	39	14	7.6	.1	.4	86	72
APR 21...	17	4.0	5.1	1.2	41	11	7.6	.1	.8	81	73
MAY 12...	16	4.0	5.5	1.1	40	13	7.6	.1	.4	86	72
JUN 09...	15	3.7	5.9	1.0	42	12	7.7	.1	.3	95	72
JUL 14...	16	3.8	5.2	1.1	42	10	7.6	.1	.4	72	70
AUG 12...	16	3.8	5.2	1.0	46	12	7.6	.1	.7	76	74
SEP 08...	17	4.0	5.4	1.2	39	13	7.7	.1	1.2	84	73

K Results based on colony count outside the acceptable range (non-ideal colony count).
< Actual value is known to be less than the value shown.

04295000 RICHELIEU RIVER (LAKE CHAMPLAIN) AT ROUSES POINT, NY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	NITRO-GEN, NC2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN, DIS-SOLVED (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)
OCT 01...	.05	.02	.05	.09	.37	.24	.42	.33	.47	.35	.010
NOV 05...	.04	.09	.01	.06	.29	.24	.30	.30	.34	.39	.010
APR 21...	.18	.21	.07	.06	.19	.36	.26	.42	.44	.63	.020
MAY 12...	.15	.14	.03	.04	.24	.12	.27	.16	.42	.30	.020
JUN 09...	.14	.14	.05	.05	.23	.14	.28	.19	.42	.33	.010
JUL 14...	.06	.07	.04	.04	.22	.26	.26	.30	.32	.37	.010
AUG 12...	.06	.08	.04	.06	.26	.22	.30	.28	.36	.36	.030
SEP 08...	.02	.03	.03	.04	.27	.07	.30	.11	.32	.14	.000

DATE	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA)	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV-ERABLE (UG/L AS CO)	COBALT, DIS-SOLVED (UG/L AS CO)
OCT 01...	.000	--	--	--	--	--	--	--	--	--	--
NOV 05...	.000	0	1	0	10	0	1	10	10	0	0
APR 21...	.010	0	0	<50	10	2	0	20	10	0	0
MAY 12...	.010	--	--	--	--	--	--	--	--	--	--
JUN 09...	.010	--	--	--	--	--	--	--	--	--	--
JUL 14...	.010	1	1	<50	10	0	1	10	<10	0	0
AUG 12...	.020	--	--	--	--	--	--	--	--	--	--
SEP 08...	.000	--	--	--	--	--	--	--	--	--	--

DATE	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	MERCURY DIS-SOLVED (UG/L AS HG)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)
OCT 01...	--	--	--	--	--	--	--	--	--	--	--
NOV 05...	2	2	60	0	0	0	10	1	<.1	<.1	0
APR 21...	4	3	110	10	12	15	10	2	.1	.1	1
MAY 12...	--	--	--	--	--	--	--	--	--	--	--
JUN 09...	--	--	--	--	--	--	--	--	--	--	--
JUL 14...	1	1	100	20	0	0	20	9	.2	<.1	3
AUG 12...	--	--	--	--	--	--	--	--	--	--	--
SEP 08...	--	--	--	--	--	--	--	--	--	--	--

< Actual value is known to be less than the value shown.

04295000 RICHELIEU RIVER (LAKE CHAMPLAIN) AT ROUSES POINT, NY--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, TOTAL (UG/L AS SE)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG)	SILVER, DIS-SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	ZINC, DIS-SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED (MG/L AS C)
OCT 01...	--	--	--	--	--	--	--	3.1	--	--
NOV 05...	1	0	0	0	0	30	6	--	6.8	.4
APR 21...	2	0	0	0	0	20	60	--	--	.3
MAY 12...	--	--	--	0	--	--	--	4.4	--	--
JUN 09...	--	--	--	--	--	--	--	4.4	--	--
JUL 14...	0	0	0	0	0	20	10	--	7.0	.3
AUG 12...	--	--	--	0	--	--	--	3.3	--	--
SEP 08...	--	--	--	--	--	--	--	3.9	--	--

PESTICIDE ANALYSES

DATE	PCB, TOTAL (UG/L)	PCB, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	ALDRIN, TOTAL (UG/L)	ALDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	CHLOR-DANE, TOTAL (UG/L)	CHLOR-DANE, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DDD, TOTAL (UG/L)	DDD, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DDE, TOTAL (UG/L)	DDE, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DDT, TOTAL (UG/L)
NOV 05...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

DATE	DDT, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DI-AZINON, TOTAL (UG/L)	DI-AZINON, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DI-ELDRIN TOTAL (UG/L)	DI-ELDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	ETHION, TOTAL (UG/L)	ETHION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	HEPTA-CHLOR, TOTAL (UG/L)	HEPTA-CHLOR, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)
NOV 05...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

DATE	HEPTA-CHLOR EPOXIDE TOTAL (UG/L)	HEPTA-CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL (UG/L)	LINDANE TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	MALA-THION, TOTAL (UG/L)	MALA-THION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	METH-OXY-CHLOR, TOTAL (UG/L)	METHYL PARA-THION, TOTAL (UG/L)	METHYL PARA-THION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRI-THION, TOTAL (UG/L)
NOV 05...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

DATE	METHYL TRI-THION, TOT. IN BOTTOM MATL. (UG/KG)	PARA-THION, TOTAL (UG/L)	PARA-THION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	TOX-APHENE, TOTAL (UG/L)	TOXA-PHENE, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	TOTAL TRI-THION (UG/L)	TRI-THION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
NOV 05...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

ND Material specifically analyzed for, but not detected.

04295000 RICHELIEU RIVER (LAKE CHAMPLAIN) AT ROUSES POINT, NY--Continued

WATER-QUALITY DATA, APRIL TO SEPTEMBER 1980

DATE	TIME	SAMPLE LOCATION, CROSS SECTION (FT FM R BANK)	SAMPLING DEPTH (FT)	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE, WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
APR							
21...	0945	275	1.0	144	5.5	12.5	101
21...	0946	275	5.0	146	6.0	12.6	102
21...	0947	275	10	145	5.5	13.0	105
21...	0948	275	15	144	5.5	12.2	98
21...	1015	550	1.0	145	5.0	13.2	105
21...	1016	550	5.0	145	5.0	13.2	105
21...	1017	550	10	144	5.0	13.2	105
21...	1018	550	15	144	5.0	13.2	105
21...	1100	825	1.0	148	5.0	13.0	103
21...	1101	825	5.0	148	5.0	13.1	104
21...	1102	825	10	146	5.0	13.1	104
21...	1104	825	20	146	5.0	13.1	104
21...	1105	825	25	145	5.0	12.6	100
21...	1130	1100	1.0	146	5.5	13.0	105
21...	1131	1100	5.0	146	5.0	13.1	104
21...	1132	1100	10	144	5.0	13.1	104
21...	1133	1100	15	145	5.0	13.1	104
21...	1134	1100	20	144	5.0	13.0	104
21...	1135	1100	25	144	5.0	12.1	96
21...	1215	1375	1.0	147	5.5	12.9	104
21...	1216	1375	5.0	146	5.5	13.0	105
21...	1217	1375	10	146	5.5	13.1	106
21...	1218	1375	15	146	5.5	13.0	105
JUN							
09...	1215	1375	1.0	145	14.5	8.5	87
09...	1216	1375	5.0	145	14.5	8.6	88
09...	1217	1375	10	145	14.5	8.6	88
09...	1218	1375	15	144	14.5	8.5	87
09...	1230	1100	1.0	131	14.0	8.6	88
09...	1231	1100	5.0	145	14.0	8.8	90
09...	1232	1100	10	145	14.0	8.8	90
09...	1233	1100	15	144	14.0	8.7	89
09...	1235	825	1.0	144	14.0	8.7	89
09...	1236	825	5.0	145	14.0	8.7	89
09...	1237	825	10	144	14.0	8.6	88
09...	1238	825	15	145	14.0	8.7	89
09...	1239	825	20	146	14.0	8.7	89
09...	1240	825	25	175	14.0	8.6	88
09...	1245	550	1.0	146	14.0	8.6	88
09...	1246	550	5.0	151	14.0	8.7	89
09...	1247	550	10	150	14.0	8.7	89
09...	1248	550	15	143	14.0	8.7	89
09...	1249	550	20	143	14.0	8.6	88
09...	1250	275	1.0	160	14.5	8.8	90
09...	1251	275	5.0	160	14.5	8.8	90
09...	1252	275	10	160	14.0	8.8	90
09...	1253	275	15	159	14.0	8.7	89
SEP							
08...	1130	275	1.0	142	20.5	8.3	95
08...	1131	275	5.0	141	20.5	8.0	92
08...	1132	275	10	142	20.0	8.3	94
08...	1133	275	15	142	20.0	8.6	97
08...	1145	550	1.0	141	20.5	8.1	93
08...	1146	550	5.0	141	20.5	8.1	93
08...	1147	550	10	141	20.5	8.2	94
08...	1148	550	15	141	20.0	8.4	95
08...	1201	825	1.0	140	20.5	8.2	94
08...	1202	825	5.0	142	20.5	8.0	92
08...	1203	825	10	141	20.5	8.0	92
08...	1204	825	15	141	20.5	8.0	92
08...	1205	825	20	140	20.5	7.9	90
08...	1215	1100	1.0	141	20.5	8.2	94
08...	1216	1100	5.0	141	20.5	8.0	91
08...	1217	1100	10	141	20.5	8.0	91
08...	1218	1100	15	140	20.5	8.0	91
08...	1219	1100	19	140	20.5	8.1	93
08...	1230	1375	1.0	144	20.5	8.6	97
08...	1231	1375	5.0	146	20.5	8.4	96
08...	1232	1375	8.0	146	20.5	7.7	88

04295000 RICHELIEU RIVER (LAKE CHAMPLAIN) AT ROUSES POINT, NY--Continued

SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	SEDIMENT, SUSPENDED (MG/L)	DATE	TIME	SEDIMENT, SUSPENDED (MG/L)
OCT 01...	1300	2	JUL 14...	1200	1
NOV 05...	1300	1	AUG 12...	1300	2
MAY 12...	1130	5	SEP 08...	1200	1
JUN 09...	1300	1			

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, MAY TO SEPTEMBER 1980

PERIPHYTON

Dates of exposure	Length of exposure (days)	Biomass (g/m^2)		Chlorophyll a (mg/m^2)	Chlorophyll b (mg/m^2)	Sampling method
		Dry weight	Ash weight			
May 12 to June 9	28	3.39	1.97	2.19	1.21	Polyethylene strip
June 9 to July 14	35	2.36	.787	1.47	1.14	Polyethylene strip
July 14 to Aug. 12	29	1.42	.472	1.63	.980	Polyethylene strip
Aug. 12 to Sept. 8	27	4.09	1.73	2.27	1.42	Polyethylene strip

04295000 RICHELIEU RIVER (LAKE CHAMPLAIN) AT ROUSES POINT, NY--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, NOVEMBER 1979 TO SEPTEMBER 1980

PHYTOPLANKTON

DATE	NOV 5,79		MAY 12,80		JUN 9,80		JUL 14,80		AUG 12,80		SEP 8,80	
TIME	1300		1130		1300		1200		1300		1200	
TOTAL CELLS/ML	140		640		3300		210		1400		230	
DIVERSITY: DIVISION	1.4		1.7		1.3		0.9		0.8		1.8	
.CLASS	1.4		1.7		1.3		0.9		0.8		1.8	
..ORDER	1.8		2.3		1.5		1.2		1.5		1.9	
...FAMILY	2.1		2.8		1.6		1.2		1.6		1.9	
....GENUS	2.1		2.9		1.7		1.8		1.6		2.1	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)												
.CHLOROPHYCEAE												
..CHLOROCOCCALES												
...CHARACIACEAE												
....SCHROEDERIA	--	-	--	-	--	-	--	-	13	1	--	-
...OOCYSTACEAE												
....ANKISTRODESMUS	13	9	77	12	27	1	41‡	20	--	-	--	-
....DICTYOSPHAERIUM	--	-	--	-	230	7	82‡	40	--	-	--	-
....KIRCHNERIELLA	--	-	--	-	*	0	--	-	--	-	--	-
....SELENASTRUM	--	-	--	-	--	-	--	-	13	1	64‡	28
....TREUBARIA	--	-	--	-	--	-	--	-	--	-	13	6
...SCENEDESMACEAE												
....SCENEDESMUS	52‡	36	51	8	--	-	--	-	77	6	--	-
..VOLVOCALES												
...CHLAMYDOMONADACEAE												
....CHLAMYDOMONAS	--	-	13	2	--	-	14	7	26	2	--	-
..ZYGNEMATALES												
...DESMIDIACEAE												
....COSMARIUM	13	9	--	-	--	-	--	-	--	-	--	-
CHRYSOPHYTA												
.BACILLARIOPHYCEAE												
..CENTRALES												
...COSCINODISCACEAE												
....CYCLOTELLA	--	-	13	2	55	2	--	-	13	1	13	6
....MELOSIRA	--	-	26	4	--	-	--	-	--	-	--	-
....STEPHANODISCUS	--	-	13	2	--	-	--	-	--	-	--	-
..PENNALES												
...FRAGILARIACEAE												
....ASTERIONELLA	--	-	140‡	22	55	2	--	-	--	-	--	-
....FRAGILARIA	--	-	--	-	690‡	21	--	-	--	-	--	-
...NAVICULACEAE												
....NAVICULA	--	-	--	-	--	-	--	-	13	1	13	6
...NITZSCHIACEAE												
....NITZSCHIA	--	-	51	8	27	1	--	-	51	4	--	-
.CHRYSOPHYCEAE												
..CHRYSOMONADALES												
...OCHROMONADACEAE												
....OCHROMONAS	--	-	--	-	--	-	69‡	33	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)												
.CRYPTOPHYCEAE												
..CRYPTOMONADALES												
...CRYPTOCHRYSIDACEAE												
....CHROOMONAS	39‡	27	--	-	*	0	--	-	--	-	26	11
CYANOPHYTA (BLUE-GREEN ALGAE)												
.CYANOPHYCEAE												
..CHROOCOCCALES												
...CHROOCOCCACEAE												
....ANACYSTIS	26‡	18	64	10	--	-	--	-	270‡	20	100‡	44
....GOMPHOSPHAERIA	--	-	--	-	2100‡	63	--	-	--	-	--	-
..HORMOGONALES												
...NOSTOCACEAE												
....ANABAENA	--	-	180‡	28	--	-	--	-	890‡	65	--	-
...OSCILLATORIACEAE												
....OSCILLATORIA	--	-	--	-	96	3	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)												
.EUGLENOPHYCEAE												
..EUGLENALES												
...EUGLENACEAE												
....EUGLENA	--	-	13	2	--	-	--	-	--	-	--	-
PYRRHOPHYTA (FIRE ALGAE)												
.DINOPHYCEAE												
..PERIDINIALES												
...PERIDINIACEAE												
....PERIDINIUM	--	-	--	-	*	0	--	-	--	-	--	-

NOTE: ‡ - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15 PERCENT
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2 PERCENT

04295500 LAKE MEMPHREMAGOG AT NEWPORT, VT

LOCATION.--Lat 44°56'15", long 72°12'21", Orleans County, Hydrologic Unit 01110000, on west side of bridge on U.S. Highway 5 at Newport.

PERIOD OF RECORD.--Gage heights: May 1931 to current year.

GAGE.--Water-stage recorder. Datum of gage is 673.00 ft (205.130 m) National Geodetic Vertical Datum of 1929. Prior to July 21, 1934, nonrecording gage on highway bridge 0.1 mi (0.2 km) southeast at same datum. July 21, 1934, to Aug. 22, 1961, nonrecording gage on east side, and Aug. 23, 1961, to Oct. 18, 1966, on west side of bridge at present site and datum.

REMARKS.--Elevation of lake regulated by powerplant and gates at Magog, Quebec.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 12.92 ft (3.938 m) Apr. 20, 1933; minimum recorded, 6.48 ft (1.975 m) Nov. 2, 1968 (affected by seiche), but may have been lower during period of use of nonrecording gage.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 9.65 ft (2.941 m) May 1 (affected by sciche); minimum gage height not determined; minimum daily, 7.11 ft (2.167 m) Mar. 17.

MEAN GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.98	8.01	8.90	9.23	8.07	7.31	8.31	9.57	9.30	8.93	8.65	8.13
2	7.95	8.02	8.92	9.21	8.02	7.28	8.38	9.47	9.34	8.92	8.64	8.18
3	7.94	8.10	8.96	9.21	8.00	7.27	8.45	9.48	9.33	8.91	8.63	8.24
4	7.90	8.21	8.94	9.16	7.99	7.25	8.51	9.53	9.37	8.89	8.58	8.25
5	7.88	8.26	8.90	9.11	7.97	7.25	8.62	9.49	9.48	8.90	8.56	8.20
6	7.84	8.32	8.85	9.09	7.95	7.27	8.73	9.50	9.48	8.81	8.59	8.22
7	7.85	8.33	8.90	9.03	7.92	7.24	8.78	9.51	9.44	8.80	8.57	8.21
8	7.82	8.36	8.92	8.86	7.90	7.21	8.82	9.54	9.36	8.82	8.56	8.19
9	7.80	8.39	8.88	8.88	7.87	7.22	8.85	9.55	9.36	8.76	8.58	8.12
10	7.84	8.42	8.94	8.83	7.85	7.20	8.91	9.52	9.30	8.75	8.53	8.08
11	7.83	8.48	8.88	8.75	7.83	7.22	9.04	9.49	9.26	8.74	8.52	8.06
12	7.82	8.53	8.92	8.73	7.80	7.20	9.20	9.47	9.24	8.68	8.52	8.10
13	7.84	8.57	8.95	8.72	7.79	7.18	9.38	9.42	9.17	8.65	8.51	8.05
14	7.83	8.58	8.95	8.70	7.79	7.17	9.49	9.44	9.13	8.64	8.51	8.08
15	7.82	8.59	8.91	8.70	7.77	7.15	9.57	9.38	9.14	8.64	8.50	8.14
16	7.80	8.58	8.91	8.69	7.75	7.15	9.53	9.38	9.15	8.63	8.45	8.08
17	7.79	8.54	8.90	8.64	7.73	7.11	9.49	9.42	9.10	8.63	8.43	8.02
18	7.76	8.48	8.89	8.59	7.66	7.18	9.44	9.46	9.04	8.62	8.43	8.17
19	7.70	8.49	8.85	8.53	7.65	7.21	9.40	9.40	9.02	8.61	8.42	8.16
20	7.65	8.48	8.82	8.49	7.58	7.25	9.48	9.38	9.01	8.60	8.38	8.11
21	7.71	8.43	8.80	8.44	7.53	7.30	9.50	9.38	9.00	8.59	8.35	8.18
22	7.75	8.42	8.78	8.40	7.51	7.38	9.50	9.35	9.02	8.61	8.32	8.20
23	7.76	8.42	8.73	8.34	7.50	7.48	9.48	9.31	9.02	8.63	8.30	8.27
24	7.82	8.40	8.70	8.30	7.49	7.59	9.45	9.28	9.03	8.64	8.28	8.26
25	7.87	8.42	8.80	8.26	7.49	7.70	9.48	9.25	9.03	8.63	8.25	8.23
26	7.88	8.47	9.01	8.26	7.47	7.81	9.55	9.27	9.02	8.63	8.24	8.28
27	7.87	8.56	9.11	8.21	7.44	7.82	9.57	9.28	8.98	8.65	8.23	8.34
28	7.90	8.74	9.14	8.18	7.42	7.85	9.58	9.28	8.96	8.67	8.19	8.35
29	7.94	8.83	9.16	8.15	7.39	7.87	9.60	9.29	8.95	8.66	8.18	8.32
30	7.96	8.89	9.20	8.12	---	8.00	9.63	9.31	8.94	8.66	8.14	8.28
31	7.98	---	9.23	8.08	---	8.13	---	9.35	---	8.65	8.11	---
MEAN	7.84	8.44	8.93	8.64	7.73	7.40	9.19	9.41	9.17	8.71	8.42	8.18
MAX	7.98	8.89	9.23	9.23	8.07	8.13	9.63	9.57	9.48	8.93	8.65	8.35
MIN	7.65	8.01	8.70	8.08	7.39	7.11	8.31	9.25	8.94	8.59	8.11	8.02

CAL YR 1979 MEAN 8.53 MAX 10.17 MIN 6.66
WTR YR 1980 MEAN 8.51 MAX 9.63 MIN 7.11

NOTE.--No gage-height record Oct. 1-8, Oct. 24 to Dec. 4, Dec. 16-27, Feb. 4-13, Feb. 19 to Mar. 25, Mar. 27-28, Apr. 8 to Apr. 24, May 15-30, June 18 to Aug. 29.

04296000 BLACK RIVER AT COVENTRY, VT

LOCATION.--Lat 44°52'08", long 72°16'14", Orleans County, Hydrologic Unit 01110000, on right bank 15 ft (5 m) downstream from highway bridge, 800 ft (250 m) upstream from Stony Brook, and 0.4 mi (0.6 km) northwest of Coventry.

DRAINAGE AREA.--122 mi^2 (316 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1951 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 725 ft (221 m), from topographic map.

REMARKS.--Records good except those for winter period, which are fair. Occasional diurnal fluctuation at low flow by mill upstream; greater regulation prior to 1960. Observation of water temperature and specific conductance made during the year.

AVERAGE DISCHARGE.--29 years, 201 ft^3/s (5.692 m^3/s), 22.37 in/yr (568 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,740 ft^3/s (106 m^3/s) Apr. 2, 1976, gage height, 7.91 ft (2.411 m); minimum, 11 ft^3/s (0.31 m^3/s) Aug. 29 to Sept. 1, 1953; minimum daily, 11 ft^3/s (0.31 m^3/s) Aug. 29 to Sept. 1, 1953.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 997 ft^3/s (28.2 m^3/s) Apr. 13, gage height, 5.13 ft (1.564 m), no peak discharge above base of 1,700 ft (48 m); maximum gage height 5.43 ft (1.6555 m), Dec. 25, ice jam; minimum discharge, 24 ft^3/s (0.68 m^3/s) Mar. 4, 5; minimum daily, 24 ft^3/s (0.68 m^3/s) Mar. 4, 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	93	197	120	38	26	533	218	61	125	51	50
2	33	96	169	110	37	26	424	201	72	157	47	129
3	31	255	153	98	36	25	355	183	72	122	91	189
4	30	320	134	88	35	24	329	164	173	87	91	145
5	32	210	135	82	34	24	427	152	421	61	63	77
6	33	143	131	76	33	25	352	160	297	55	54	58
7	41	122	170	72	32	26	269	225	153	56	52	50
8	44	109	192	68	31	27	284	265	108	54	51	43
9	44	98	152	70	30	27	305	232	108	53	49	39
10	50	123	133	68	29	28	619	197	103	54	47	38
11	56	143	132	66	29	31	778	175	97	46	43	38
12	63	122	189	240	28	30	763	153	86	41	42	39
13	101	101	273	230	28	29	902	138	75	39	67	37
14	151	92	181	200	27	29	722	127	65	38	79	46
15	104	89	142	220	27	29	631	120	58	37	62	124
16	99	87	143	150	26	29	586	109	56	37	67	153
17	90	84	130	110	26	30	427	100	58	37	56	86
18	80	94	100	80	26	110	305	98	54	37	49	135
19	69	94	80	74	26	250	245	284	50	39	43	191
20	104	87	64	68	27	220	225	279	48	37	42	116
21	118	95	57	60	27	265	260	175	52	36	46	88
22	94	101	56	52	27	430	243	129	60	39	42	101
23	190	103	60	50	26	535	205	106	64	65	37	148
24	223	103	110	47	26	500	195	93	52	116	35	124
25	150	115	480	46	26	460	193	85	44	133	32	91
26	112	214	620	45	26	400	282	76	41	72	31	80
27	95	651	460	44	27	385	332	68	39	58	30	108
28	118	543	300	43	27	500	272	62	37	62	33	129
29	125	436	190	42	27	615	232	58	36	59	36	96
30	115	267	160	41	---	731	238	55	36	53	36	76
31	110	---	140	39	---	648	---	54	---	53	38	---
TOTAL	2738	5190	5633	2799	844	6514	11933	4541	2676	1958	1542	2824
MEAN	88.3	173	182	90.3	29.1	210	398	146	89.2	63.2	49.7	94.1
MAX	223	651	620	240	38	731	902	284	421	157	91	191
MIN	30	84	56	39	26	24	193	54	36	36	30	37
CFSM	.72	1.42	1.49	.74	.24	1.72	3.26	1.20	.73	.52	.41	.77
IN.	.83	1.58	1.72	.85	.26	1.99	3.64	1.38	.82	.60	.47	.86

CAL YR 1979 TOTAL 74536 MEAN 204 MAX 2200 MIN 20 CFSM 1.67 IN 22.73
WTR YR 1980 TOTAL 49192 MEAN 134 MAX 902 MIN 24 CFSM 1.10 IN 15.00

04296000 BLACK RIVER AT COVENTRY, VT.--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1977 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: November 1977 to June 1979.
WATER TEMPERATURES: November 1977 to current year.

INSTRUMENTATION.--Water-quality monitor since November 1977.

REMARKS.--Interruptions in the record were due to malfunctions of the instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum recorded, 229 micromhos Aug. 8, 1978; minimum recorded, 62 micromhos Jan. 28, 29, 1978.
WATER TEMPERATURES: Maximum recorded, 28.0°C July 8, Aug. 9, 1978; minimum recorded, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum recorded, 26.5°C Aug. 7; minimum recorded, 0.0°C on many days during winter period.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW (CFS)	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPER-ATURE, WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
OCT											
18...	1200	--	76	107	--	6.0	--	--	--	--	--
31...	0930	--	115	158	7.4	3.5	1.0	13.2	99	210	48
31...	1000	--	115	--	--	3.5	--	--	--	--	--
NOV											
27...	1000	--	730	107	6.8	7.5	40	11.2	93	6000	2000
DEC											
05...	1030	--	143	145	--	.0	--	--	--	--	--
11...	0940	--	129	155	7.4	.0	1.0	14.0	96	46	K17
JAN											
09...	0845	--	70	--	--	.0	--	--	--	--	--
09...	0900	--	70	210	7.1	.5	.50	12.6	87	23	K6
FEB											
11...	1000	29	--	245	8.0	.0	.70	14.0	96	56	K1
14...	0900	--	28	--	--	.0	--	--	--	--	--
MAR											
24...	0945	500	--	97	6.8	.5	1.0	13.5	94	390	K2700
APR											
30...	1015	--	241	141	7.3	7.5	2.8	12.2	101	K10	K60
MAY											
09...	1245	--	229	75	--	12.0	--	--	--	--	--
28...	1100	--	62	195	8.0	13.0	.70	10.8	102	48	K10
JUN											
18...	1230	--	54	114	--	--	--	--	--	--	--
24...	0930	--	54	200	7.3	17.4	.50	9.0	93	600	140
JUL											
15...	1230	--	37	--	--	25.0	--	--	--	--	--
30...	0930	--	51	224	7.5	20.0	1.6	9.2	100	590	121
AUG											
07...	1100	--	52	--	--	20.0	--	--	--	--	--
27...	0945	--	30	257	7.5	19.7	.80	8.3	90	450	46
SEP											
09...	1145	--	40	--	--	17.0	--	--	--	--	--
23...	1000	--	155	198	7.4	16.7	.90	9.1	93	600	96

K, NON-IDEAL COLONY COUNT.

04296000 BLACK RIVER AT COVENTRY, VT.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)
OCT											
18...	--	--	--	--	--	--	--	--	--	--	--
31...	72	13	23	3.6	4.1	1.0	59	8.9	5.6	.1	5.7
31...	--	--	--	--	--	--	--	--	--	--	--
NOV											
27...	48	15	15	2.5	2.6	2.0	33	9.0	4.5	.1	5.3
DEC											
05...	--	--	--	--	--	--	--	--	--	--	--
11...	77	17	25	3.5	3.1	.7	60	9.5	4.9	.0	6.1
JAN											
09...	--	--	--	--	--	--	--	--	--	--	--
09...	100	15	34	4.6	3.5	.9	89	14	5.5	.0	7.3
FEB											
11...	110	10	34	5.6	4.0	.9	98	16	6.1	1.4	7.6
14...	--	--	--	--	--	--	--	--	--	--	--
MAR											
24...	35	13	11	1.8	3.9	3.6	22	7.1	7.4	.0	2.8
APR											
30...	61	6	20	2.8	3.1	.9	55	9.5	5.1	.1	4.4
MAY											
09...	--	--	--	--	--	--	--	--	--	--	--
28...	92	13	30	4.1	3.2	.7	79	12	5.1	.0	1.5
JUN											
18...	--	--	--	--	--	--	--	--	--	--	--
24...	90	11	29	4.2	3.5	.8	79	9.9	5.0	.1	2.8
JUL											
15...	--	--	--	--	--	--	--	--	--	--	--
30...	100	15	34	4.8	3.5	1.0	90	10	5.3	.0	5.6
AUG											
07...	--	--	--	--	--	--	--	--	--	--	--
27...	120	21	38	5.8	3.5	1.1	98	11	5.6	.1	4.1
SEP											
09...	--	--	--	--	--	--	--	--	--	--	--
23...	98	30	28	6.7	3.8	1.2	68	11	6.0	.1	4.9

DATE	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)
OCT											
18...	--	--	--	--	--	--	--	--	--	--	--
31...	111	89	.19	.21	.000	.040	.42	.59	.67	.59	.13
31...	--	--	--	--	--	--	--	--	--	--	--
NOV											
27...	79	62	.29	.25	.140	.050	.60	.96	.90	1.1	.45
DEC											
05...	--	--	--	--	--	--	--	--	--	--	--
11...	114	90	.37	.33	.000	.010	.43	.26	.77	.26	.00
JAN											
09...	--	--	--	--	--	--	--	--	--	--	--
09...	121	125	.41	.45	.300	.030	.18	.03	.66	.33	.12
FEB											
11...	124	136	.36	.35	.060	.060	.15	.08	.56	.14	.00
14...	--	--	--	--	--	--	--	--	--	--	--
MAR											
24...	43	54	.60	.68	.570	.430	.87	.31	2.0	.88	.00
APR											
30...	92	81	.46	.46	.040	.020	.25	.40	.73	.44	.17
MAY											
09...	--	--	--	--	--	--	--	--	--	--	--
28...	112	104	.02	.03	.040	.040	.17	.12	.24	.16	.00
JUN											
18...	--	--	--	--	--	--	--	--	--	--	--
24...	120	103	.13	.15	.040	.020	.37	.19	.54	.23	.00
JUL											
15...	--	--	--	--	--	--	--	--	--	--	--
30...	122	119	.18	.17	.060	.000	.22	.00	.39	.00	.00
AUG											
07...	--	--	--	--	--	--	--	--	--	--	--
27...	131	128	.07	.07	.060	.060	.17	.04	.30	.10	.00
SEP											
09...	--	--	--	--	--	--	--	--	--	--	--
23...	127	103	.12	.14	.060	.050	--	.31	--	.37	--

04296000 BLACK RIVER AT COVENTRY, VT.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, TOTAL (MG/L AS PO4)	PHOSPHORUS, DISSOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC SUSPENDED (MG/L AS C)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT											
18...	--	--	--	--	--	--	--	--	--	--	--
31...	.46	.78	.010	.03	.010	--	.3	4.9	2	.62	100
31...	--	--	--	--	--	--	--	--	--	--	--
NOV											
27...	.65	1.4	.230	.71	.080	12	--	--	140	276	100
DEC											
05...	--	--	--	--	--	--	--	--	--	--	--
11...	.44	.63	.010	.03	.010	3.3	--	--	4	1.4	75
JAN											
09...	--	--	--	--	--	--	--	--	--	--	--
09...	.21	.74	.010	.03	.010	--	.3	2.1	4	.76	100
FEB											
11...	.21	.50	.020	.06	.030	1.0	--	--	3	.23	83
14...	--	--	--	--	--	--	--	--	--	--	--
MAR											
24...	1.3	1.5	.170	.52	.120	7.3	--	--	40	54	87
APR											
30...	.27	.90	.020	.06	.010	--	.4	3.2	6	3.9	93
MAY											
09...	--	--	--	--	--	--	--	--	--	--	--
28...	.21	.18	.020	.06	.000	4.3	--	--	5	.84	95
JUN											
18...	--	--	--	--	--	--	--	--	--	--	--
24...	.39	.36	.020	.06	.010	1.4	--	--	2	.29	100
JUL											
15...	--	--	--	--	--	--	--	--	--	--	--
30...	.22	.18	.020	.06	.010	--	.3	4.4	--	--	--
AUG											
07...	--	--	--	--	--	--	--	--	--	--	--
27...	.23	.17	.030	.09	.010	3.9	--	--	12	.97	100
SEP											
09...	--	--	--	--	--	--	--	--	--	--	--
23...	--	.49	.040	.12	.030	5.3	--	--	--	--	--

DATE	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUSPENDED TOTAL (UG/L AS AS)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	BARIUM, SUSPENDED RECOVERABLE (UG/L AS BA)	BARIUM, DISSOLVED (UG/L AS BA)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM SUSPENDED RECOVERABLE (UG/L AS CD)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, SUSPENDED RECOV. (UG/L AS CR)
OCT											
31...	1	0	1	200	200	0	1	0	2	10	0
JAN											
09...	2	1	1	100	90	10	0	0	0	20	10
FEB											
11...	--	--	--	--	--	--	--	--	--	--	--
APR											
30...	1	0	1	<50	--	10	0	0	5	20	10
MAY											
28...	--	--	--	--	--	--	--	--	--	--	--
JUN											
24...	--	--	--	--	--	--	--	--	--	--	--
JUL											
30...	2	0	4	100	0	100	0	0	0	30	10
AUG											
27...	--	--	--	--	--	--	--	--	--	--	--
SEP											
23...	--	--	--	--	--	--	--	--	--	--	--

04296000 BLACK RIVER AT COVENTRY, VT.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, TOTAL RECOVERABLE (UG/L AS CO)	COBALT, SUSPENDED RECOVERABLE (UG/L AS CO)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, SUSPENDED RECOVERABLE (UG/L AS CU)	COPPER, DISSOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)
OCT 31...	<10	0	0	1	3	1	2	520	350	170	0
JAN 09...	<10	0	0	0	1	0	1	280	160	120	0
FEB 11...	--	--	--	--	--	--	--	--	--	--	--
APR 30...	10	0	0	0	2	1	1	750	670	80	1
MAY 28...	--	--	--	--	--	--	--	--	--	--	--
JUN 24...	--	--	--	--	--	--	--	--	--	--	--
JUL 30...	20	0	0	0	0	0	1	440	340	100	16
AUG 27...	--	--	--	--	--	--	--	--	--	--	--
SEP 23...	--	--	--	--	--	--	--	--	--	--	--

DATE	LEAD, SUSPENDED RECOVERABLE (UG/L AS PB)	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY SUSPENDED RECOVERABLE (UG/L AS HG)	MERCURY DISSOLVED (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICKEL, SUSPENDED RECOVERABLE (UG/L AS NI)
OCT 31...	0	1	40	10	30	.1	.0	.1	2	2
JAN 09...	0	0	40	10	30	<.1	<.0	<.1	1	1
FEB 11...	--	--	--	--	--	--	--	--	--	--
APR 30...	0	1	50	30	20	<.1	<.0	<.1	12	12
MAY 28...	--	--	--	--	--	--	--	--	--	--
JUN 24...	--	--	--	--	--	--	--	--	--	--
JUL 30...	16	0	70	20	50	<.1	--	<.1	1	1
AUG 27...	--	--	--	--	--	--	--	--	--	--
SEP 23...	--	--	--	--	--	--	--	--	--	--

DATE	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, SUSPENDED TOTAL (UG/L AS SE)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, TOTAL RECOVERABLE (UG/L AS AG)	SILVER, SUSPENDED RECOVERABLE (UG/L AS AG)	SILVER, DISSOLVED (UG/L AS AG)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, SUSPENDED RECOVERABLE (UG/L AS ZN)	ZINC, DISSOLVED (UG/L AS ZN)
OCT 31...	0	0	0	0	--	--	0	10	2	8
JAN 09...	0	0	0	0	0	0	0	10	0	10
FEB 11...	--	--	--	--	0	--	--	--	--	--
APR 30...	0	0	0	0	0	0	0	320	320	0
MAY 28...	--	--	--	--	0	--	--	--	--	--
JUN 24...	--	--	--	--	0	--	--	--	--	--
JUL 30...	0	0	0	0	0	0	0	20	10	10
AUG 27...	--	--	--	--	0	--	--	--	--	--
SEP 23...	--	--	--	--	0	--	--	--	--	--

04296000 BLACK RIVER AT COVENTRY, VT.--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

PERIPHYTON

Dates of exposure	Length of exposure (days)	Biomass (g/m²)		Chlorophyll a (mg/m²)	Chlorophyll b (mg/m²)	Sampling method
		Dry weight	Ash weight			
May 28 to June 24	27	3.39	2.21	7.73	0.75	Polyethylene strip
July 30 to Aug. 27	28	3.54	2.60	7.22	0.56	Polyethylene strip

04296000 BLACK RIVER AT COVENTRY, VT.--Continued

QUALITATIVE AND QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

PHYTOPLANKTON

DATE	NOV 27,79	MAR 24,80	MAY 28,80	JUN 24,80
TIME	1000	0945	1100	0930
TOTAL CELLS/ML	2400	120	300	710
DIVERSITY: DIVISION	1.1	1.0	1.0	1.7
.CLASS	1.1	1.0	1.0	1.7
..ORDER	1.2	1.0	1.0	2.0
...FAMILY	3.0	2.1	2.0	2.4
....GENUS	3.2	2.1	2.0	2.4

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)								
.CHLOROPHYCEAE								
..CHLOROCOCCALES								
...OOCYSTACEAE								
....ANKISTRODESMUS	69	3	--	-	--	-	13	2
....OOCYSTIS	--	-	--	-	--	-	--	-
...SCENEDESMACEAE								
....SCENEDESMUS	55	2	52‡	44	--	-	52	7
..VOLVOCALES								
...CHLAMYDOMONADACEAE								
....CHLAMYDOMONAS	--	-	--	-	--	-	140‡	20
..ZYGNEMATALES								
...DESMIDIACEAE								
....COSMARIUM	--	-	--	-	--	-	--	-
CHRYSOPHYTA								
.BACILLARIOPHYCEAE								
..CENTRALES								
...COSCINODISCACEAE								
....CYCLOTELLA	28	1	--	-	--	-	--	-
....MELOSIRA	--	-	--	-	--	-	--	-
..PENNALES								
...ACHNANTHACEAE								
....ACHNANTHES	69	3	--	-	13	4	26	4
....COCCONEIS	55	2	--	-	--	-	--	-
...CYMBELLACEAE								
....CYMBELLA	180	8	--	-	13	4	13	2
...DIATOMACEAE								
....DIATOMA	220	9	--	-	13	4	--	-
...EUNOTIACEAE								
....EUNOTIA	14	1	--	-	--	-	--	-
...FRAGILARIACEAE								
....FRAGILARIA	55	2	13	11	--	-	--	-
....SYNEDRA	83	4	--	-	39	13	--	-
...GOMPHONEMATACEAE								
....GOMPHONEMA	69	3	13	11	--	-	--	-
...NAVICULACEAE								
....NAVICULA	400‡	17	26‡	22	--	-	39	5
...NITZSCHIACEAE								
....NITZSCHIA	470‡	20	13	11	77‡	26	90	13
...SURIRELLACEAE								
....SURIRELLA	14	1	--	-	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)								
.CRYPTOPHYCEAE								
..CRYPTOMONADALES								
...CRYPTOCHRYSIDACEAE								
....CHROOMONAS	--	-	--	-	--	-	--	-
...CRYPTOMONADACEAE								
....CRYPTOMONAS	--	-	--	-	--	-	26	4
CYANOPHYTA (BLUE-GREEN ALGAE)								
.CYANOPHYCEAE								
..CHROOCOCCALES								
...CHROOCOCCACEAE								
....ANACYSTIS	--	-	--	-	140‡	48	--	-
....COCCOCHLORIS	--	-	--	-	--	-	--	-
..HORMOGONALES								
...NOSTOCACEAE								
....ANABAENA	580‡	25	--	-	--	-	--	-
...OSCILLATORIACEAE								
....OSCILLATORIA	--	-	--	-	--	-	310‡	44

NOTE: ‡ - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15 PERCENT
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2 PERCENT

04296000 BLACK RIVER AT COVENTRY, VT.--Continued

QUALITATIVE AND QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

PHYTOPLANKTON

DATE	JUL 30,80	AUG 27,80	SEP 23,80
TIME	0930	0945	1000
TOTAL CELLS/ML	660	840	710
DIVERSITY: DIVISION	1.7	1.6	1.2
.CLASS	1.7	1.6	1.2
..ORDER	2.1	2.0	1.9
...FAMILY	2.9	2.5	3.0
....GENUS	2.9	2.5	3.0

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)						
.CHLOROPHYCEAE						
..CHLOROCOCCALES						
...OOCYSTACEAE						
....ANKISTRODESMUS	26	4	13	2	13	2
....OOCYSTIS	--	-	51	6	--	-
...SCENEDESMACEAE						
....SCENEDESMUS	77	12	330‡	40	--	-
..VOLVOCALES						
...CHLAMYDOMONADACEAE						
....CHLAMYDOMONAS	51	8	39	5	--	-
..ZYGNEMATALES						
...DESMIDIACEAE						
....COSMARIUM	--	-	--	-	13	2
CHRYSOPHYTA						
.BACILLARIOPHYCEAE						
..CENTRALES						
...COSCINODISCACEAE						
....CYCLOTELLA	26	4	77	9	26	4
....MELOSIRA	--	-	--	-	26	4
..PENNALES						
...ACHNANTHACEAE						
....ACHNANTHES	--	-	51	6	13	2
....COCCONEIS	--	-	--	-	--	-
...CYMBELLACEAE						
....CYMBELLA	51	8	13	2	64	9
...DIATOMACEAE						
....DIATOMA	--	-	--	-	52	7
...EUNOTIACEAE						
....EUNOTIA	--	-	--	-	--	-
...FRAGILARIACEAE						
....FRAGILARIA	--	-	--	-	--	-
....SYNEDRA	--	-	--	-	--	-
...GOMPHONEMATACEAE						
....GOMPHONEMA	--	-	--	-	13	2
...NAVICULACEAE						
....NAVICULA	120‡	18	--	-	77	11
...NITZSCHIACEAE						
....NITZSCHIA	120‡	18	13	2	100	15
...SURIRELLACEAE						
....SURIRELLA	--	-	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)						
.CRYPTOPHYCEAE						
..CRYPTOMONADALES						
...CRYPTOCHRYSIDACEAE						
....CHROOMONAS	--	-	13	2	--	-
...CRYPTOMONADACEAE						
....CRYPTOMONAS	39	6	13	2	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)						
.CYANOPHYCEAE						
..CHROOCOCCALES						
...CHROOCOCCACEAE						
....ANACYSTIS	150‡	24	220‡	26	--	-
....COCCOCHLORIS	--	-	--	-	100	15
..HORMOGONALES						
...NOSTOCACEAE						
....ANABAENA	--	-	--	-	--	-
...OSCILLATORIACEAE						
....OSCILLATORIA	--	-	--	-	210‡	29

NOTE: ‡ - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15 PERCENT
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2 PERCENT

04296000 BLACK RIVER AT COVENTRY, VT.--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	8.0	4.5	6.0	3.0	2.0	2.5	.5	.5	.5
2	---	---	---	8.0	5.5	7.0	2.5	1.0	2.0	.5	.5	.5
3	---	---	---	7.5	6.5	7.5	1.5	1.0	1.0	.5	.5	.5
4	---	---	---	7.0	5.5	6.5	2.0	1.0	1.0	.5	.5	.5
5	---	---	---	7.0	5.0	6.0	1.0	1.0	1.0	.5	.5	.5
6	---	---	---	6.5	5.0	5.5	2.5	1.0	1.5	.5	.5	.5
7	---	---	---	7.0	5.5	6.0	3.0	2.0	2.5	.5	.5	.5
8	---	---	---	7.0	6.0	6.5	2.5	1.0	2.0	.5	.5	.5
9	---	---	---	7.0	6.0	6.5	1.0	1.0	1.0	.5	.5	.5
10	---	---	---	8.0	6.5	7.0	1.0	1.0	1.0	1.0	.0	.5
11	---	---	---	7.0	5.5	6.5	1.0	1.0	1.0	1.0	.5	.5
12	---	---	---	7.5	5.0	6.0	2.5	1.0	1.5	1.0	.5	.5
13	---	---	---	6.5	4.5	5.5	1.5	.5	1.0	.5	.5	.5
14	---	---	---	6.0	5.0	5.5	1.0	1.0	1.0	.5	.5	.5
15	---	---	---	5.0	3.5	4.5	1.0	1.0	1.0	2.0	.5	1.0
16	---	---	---	4.0	2.0	3.0	1.0	1.0	1.0	1.5	.0	1.0
17	---	---	---	3.5	1.5	2.5	1.0	.5	1.0	.5	.5	.5
18	---	---	---	4.0	1.5	3.0	1.0	.5	1.0	1.0	.5	.5
19	---	---	---	4.0	1.0	2.5	.5	.5	.5	1.5	.5	.5
20	---	---	---	4.5	2.5	3.5	1.0	.5	.5	1.0	.5	.5
21	---	---	---	---	---	---	1.0	.5	1.0	1.0	.0	.5
22	---	---	---	---	---	---	1.0	1.0	1.0	1.5	.0	1.0
23	---	---	---	---	---	---	1.0	1.0	1.0	.0	.0	.0
24	---	---	---	---	---	---	1.0	.5	.5	---	---	---
25	---	---	---	---	---	---	.5	.5	.5	---	---	---
26	---	---	---	---	---	---	.5	.5	.5	---	---	---
27	---	---	---	9.0	8.0	9.0	.5	.5	.5	---	---	---
28	---	---	---	8.0	6.5	7.0	.5	.5	.5	---	---	---
29	---	---	---	6.5	4.5	5.5	1.0	.5	.5	---	---	---
30	---	---	---	4.5	3.5	4.0	.5	.5	.5	---	---	---
31	7.5	5.0	6.5	---	---	---	.5	.5	.5	---	---	---
MONTH	7.5	5.0	6.5	9.0	1.0	5.5	3.0	.5	1.0	2.0	.0	.5

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	.0	.0	.0				---	---	---
2	---	---	---	.0	.0	.0				---	---	---
3	---	---	---	.0	.0	.0				---	---	---
4	---	---	---	.0	.0	.0				---	---	---
5	---	---	---	.0	.0	.0				---	---	---
6	---	---	---	.0	.0	.0				---	---	---
7	---	---	---	.0	.0	.0				---	---	---
8	---	---	---	.0	.0	.0				---	---	---
9	---	---	---	.0	.0	.0				---	---	---
10	---	---	---	.0	.0	.0				---	---	---
11	---	---	---	.0	.0	.0				---	---	---
12	---	---	---	.0	.0	.0				---	---	---
13	---	---	---	.0	.0	.0				---	---	---
14	---	---	---	.0	.0	.0				---	---	---
15	---	---	---	.0	.0	.0				---	---	---
16	---	---	---	.0	.0	.0				---	---	---
17	---	---	---	.0	.0	.0				---	---	---
18	---	---	---	.0	.0	.0				---	---	---
19	---	---	---	.0	.0	.0				---	---	---
20	---	---	---	---	---	---				---	---	---
21	---	---	---	---	---	---				---	---	---
22	---	---	---	---	---	---				---	---	---
23	---	---	---	---	---	---				---	---	---
24	---	---	---	---	---	---				---	---	---
25	---	---	---	---	---	---				---	---	---
26	.5	.5	.5	---	---	---				---	---	---
27	.5	.5	.5	---	---	---				---	---	---
28	.5	.5	.5	---	---	---				16.0	13.5	15.0
29	.5	.0	.5	---	---	---				20.0	12.0	15.5
30	---	---	---	---	---	---				18.0	11.5	15.0
31	---	---	---	---	---	---				20.0	14.0	17.0
MONTH	.5	.0	.5	.0	.0	.0				20.0	11.5	15.5

04296000 BLACK RIVER AT COVENTRY, VT.--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	18.0	15.5	16.5	21.0	17.0	18.5	25.0	18.0	21.5	22.0	19.5	20.5
2	16.0	14.5	15.0	18.5	17.5	18.0	23.5	19.5	21.5	23.5	19.0	21.5
3	16.5	14.5	15.5	22.5	16.5	19.0	21.5	20.0	21.0	21.5	19.0	20.5
4	16.0	14.0	15.0	23.5	17.0	20.0	25.0	19.0	21.5	22.5	17.5	19.5
5	16.0	13.0	14.0	22.0	17.0	20.0	26.0	18.0	22.0	21.0	17.5	19.0
6	17.5	12.5	15.0	21.0	17.0	19.0	24.0	21.0	22.5	22.0	17.0	19.5
7	17.0	14.0	15.5	23.5	15.0	19.0	26.5	20.0	23.0	20.0	15.0	17.5
8	15.5	13.0	15.0	19.5	16.0	17.0	26.0	21.0	23.5	18.0	13.0	16.0
9	14.5	11.0	12.5	22.0	15.5	18.5	24.0	21.0	23.0	16.5	12.0	15.0
10	13.5	11.0	12.0	24.0	15.0	19.5	24.0	17.5	20.5	17.0	14.5	15.5
11	12.5	10.0	11.0	23.0	18.0	20.5	23.0	17.5	20.5	18.0	13.0	15.5
12	16.5	10.0	12.5	21.0	16.0	17.0	20.5	18.5	19.5	17.5	12.5	15.0
13	20.5	11.0	15.0	18.5	14.0	16.5	22.5	17.5	19.5	14.5	12.0	13.0
14	23.0	13.0	18.0	24.0	15.5	19.5	21.5	17.5	19.0	15.5	13.5	14.5
15	20.0	16.0	18.0	22.0	19.0	20.0	22.0	17.5	19.5	15.5	13.0	14.0
16	19.5	14.5	17.5	23.0	19.0	21.0	18.5	16.5	17.5	16.5	12.0	14.0
17	21.0	13.0	16.5	24.0	20.0	22.0	22.0	14.0	18.0	15.0	13.0	14.0
18	22.5	13.5	17.5	24.5	18.5	21.5	21.0	15.0	18.0	14.5	12.5	13.5
19	21.0	16.0	18.5	23.0	19.0	21.5	19.0	17.0	17.5	13.5	11.0	12.0
20	19.5	15.5	16.5	23.5	20.5	22.0	19.5	17.0	18.0	15.0	11.0	13.0
21	17.5	14.5	15.5	23.0	20.5	21.5	22.5	16.5	19.5	18.0	13.5	15.5
22	22.0	14.0	17.5	21.5	20.5	21.0	23.0	16.0	19.5	18.5	15.0	16.5
23	23.0	14.5	18.5	23.5	20.0	21.5	23.5	17.0	20.5	17.0	17.0	17.0
24	24.5	17.0	21.0	25.0	19.5	22.0	24.0	18.0	21.0	---	---	---
25	25.0	18.5	22.0	24.5	19.0	21.5	21.5	18.0	20.0	---	---	---
26	25.5	19.0	22.5	23.5	20.0	21.5	23.0	18.5	21.0	---	---	---
27	23.5	19.0	21.5	25.0	19.5	22.0	22.0	20.0	21.0	---	---	---
28	22.0	15.0	18.5	25.0	20.5	22.5	21.5	18.0	19.5	---	---	---
29	21.5	16.0	19.0	22.5	20.0	21.0	22.0	15.0	18.5	---	---	---
30	20.0	18.0	18.5	24.5	19.0	21.5	22.0	16.0	19.5	---	---	---
31	---	---	---	25.5	18.5	22.0	22.5	19.5	21.0	---	---	---
MONTH	25.5	10.0	16.5	25.5	14.0	20.5	26.5	14.0	20.5	23.5	11.0	16.0
YEAR	26.5	.0	11.0									

04296500 CLYDE RIVER AT NEWPORT, VT

LOCATION.--Lat 44°56'22", long 72°11'23", Orleans County, Hydrologic Unit 01110000, on right bank in Newport, just downstream from small right-bank tributary, and 1 mi (1.6 km) upstream from mouth.

DRAINAGE AREA.--142 mi^2 (368 km^2).

PERIOD OF RECORD.--Discharge: May 1909 to September 1919; May 1920 to August 1922, October 1922 to September 1924, November 1928 to May 1936, September 1938 to current year. Prior to November 1928, published as "at West Derby."
SPECIFIC CONDUCTANCE: October 1974 to October 1977 (discontinued).
WATER TEMPERATURES: October 1974 to October 1977 (discontinued).

REVISED RECORDS.--WSP 744: 1913(M), drainage area. WSP 924: 1940. WSP 1307: 1913-15(M).

GAGE.--Water-stage recorder and since Mar. 6, 1957, records of power generation. Datum of gage is 682.36 ft (207.983 m) National Geodetic Vertical Datum of 1929. May 25, 1909, to Sept. 20, 1915, nonrecording gage, and Sept. 21, 1915, to Sept. 30, 1924, Nov. 16, 1928, to May 4, 1936, water-stage recorder, at site 0.65 mi (1.05 km) upstream at different datum.

REMARKS.--Records fair. Flow regulated by powerplant and reservoirs upstream and, since Mar. 6, 1957, by diversion around station through canal and penstock of Newport No. 11 powerplant. Diversion computed from relation of kilowatt-hour output and measured discharge, discharge computed by adding flow over control to flow diverted through powerplant.

AVERAGE DISCHARGE.--61 years (water years 1910-19, 1921, 1923-24, 1929-35, 1939-80), 258 ft^3/s (7.307 m^3/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,900 ft^3/s (110 m^3/s) Mar. 20, 1936, gage height, 5.76 ft (1.756 m), site and datum then in use, from rating curve extended above 2,800 ft^3/s (79 m^3/s) on basis of computation of peak flow over dam; maximum daily, 2,680 ft^3/s (75.9 m^3/s) May 4, 1940; minimum daily, 2.6 ft^3/s (0.074 m^3/s) June 18, 1956.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 672 ft^3/s (19 m^3/s) Apr. 15; minimum daily, 27 ft^3/s (0.76 m^3/s) Aug. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	115	235	348	304	143	117	357	483	31	64	144	37
2	213	286	405	325	109	66	337	483	286	56	31	145
3	186	264	293	302	83	120	347	481	207	46	29	94
4	109	244	260	147	128	131	478	479	183	28	126	146
5	75	309	230	242	133	181	366	479	166	28	134	128
6	86	296	182	170	101	60	377	475	191	29	145	35
7	53	316	236	156	111	102	364	370	198	47	108	97
8	65	303	176	107	100	75	362	334	173	47	165	133
9	85	307	105	115	78	37	442	372	160	58	29	147
10	78	203	196	100	138	132	317	433	145	60	31	128
11	43	281	141	85	137	60	355	334	163	43	100	120
12	44	207	196	209	122	148	483	368	105	45	134	119
13	109	250	233	103	43	125	484	434	107	45	82	57
14	75	262	192	191	116	143	603	326	30	95	94	42
15	37	266	107	160	73	146	672	313	251	62	68	173
16	104	257	148	242	43	46	667	309	113	74	29	111
17	71	180	260	209	98	206	626	301	96	62	81	124
18	118	163	285	163	43	176	595	247	106	94	165	139
19	72	239	314	236	192	116	569	311	70	44	123	102
20	137	216	226	158	104	300	525	253	106	45	103	30
21	50	235	171	134	87	297	507	218	56	117	100	72
22	151	190	101	134	85	130	492	230	29	87	192	275
23	116	209	103	185	94	309	486	303	125	69	28	110
24	196	166	76	166	50	376	489	313	141	103	27	138
25	247	235	69	90	57	340	485	173	140	45	160	232
26	232	259	282	71	280	335	487	227	149	30	173	183
27	87	316	357	87	186	291	466	181	104	48	75	77
28	304	353	332	106	74	318	485	169	30	97	64	30
29	247	437	317	116	160	166	483	277	30	184	108	128
30	254	358	375	185	---	368	482	109	96	93	37	135
31	159	---	353	125	---	303	---	284	---	114	37	---
TOTAL	3918	7842	7069	5123	3168	5720	14188	10069	3787	2059	2922	3487
MEAN	126	261	228	165	109	185	473	325	126	66.4	94.3	116
MAX	304	437	405	325	280	376	672	483	286	184	192	275
MIN	37	163	69	71	43	37	317	109	29	28	27	30

CAL YR 1979 TOTAL 63281 MEAN 173 MAX 680 MIN 17
WTR YR 1980 TOTAL 69352 MEAN 189 MAX 672 MIN 27

As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the Geological Survey collects limited streamflow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in low-flow or floodflow analyses, depending on the type of data collected. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Crest-stage partial-record stations

The following table contains annual maximum discharges for crest-stage stations. A crest-stage gage is a device which will register the peak stage occurring between inspections of the gage. A stage-discharge relation for each gage is developed from discharge measurements made by indirect measurements of peak flow or by current meter. The date of the maximum discharge is not always certain but is usually determined by comparison with nearby continuous-record stations, weather records, or local inquiry. Only the maximum discharge for each water year is given. Information on some lower floods may have been obtained, and discharge measurements may have been made for purposes of establishing the stage-discharge relation, but these are not published herein. The years given in the period of record represent water years for which the annual maximum has been determined.

Annual maximum discharge at crest-stage partial-record stations during water year 1980

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (ft^3/s)
		Merrimack River basin					
‡01075000	Pemigewasset River at Woodstock, NH	Lat 43°58'34", long 71°40'48", Grafton County, 0.2 mi east of Woodstock and 0.7 mi upstream from Eastman Brook.	193	1940-77†, 1978-80	4-11-80	9.50	1,600
‡01082000	Contoocook River at Peterborough, NH	Lat 42°51'45", long 71°57'55", Hillsborough County, 1 mi south of Peterborough, and 1.5 mi upstream from Nubanusit Brook.	68.1	1945-77†, 1979a 1980	4-10-80	5.16	1,650
‡01085000	Contoocook River at Henniker, NH	Lat 43°09'10", long 71°51'24", Merrimack County, 1.6 mi downstream from Sand Brook and 2.5 mi southeast of Henniker.	368	1939-77†, 1979a 1980	4-11-80	10.65	4,960
‡01094000	Souhegan River at Merrimack, NH	Lat 42°51'27", long 71°30'24", Hillsborough County, at head of Wildcat Falls, 1.5 mi upstream from mouth.	171	1909-76†, 1979a 1980	4-11-80	7.28	3,020

† Operated as a continuous-record gaging station.
‡ Also a miscellaneous measurement site.
a Published in table of miscellaneous measurements.

Measurements at miscellaneous sites

Measurements of streamflow at points other than gaging stations or partial-record stations are given in the following table.

Discharge measurements made at miscellaneous sites during water year 1980

Stream	Tributary to	Location	Drainage area (mi²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft³/s)
		Merrimack River basin				
*01075000 Pemigewasset River	Merrimack River	Lat 43°58'34", long 71°40'48", Grafton County, 0.2 mi east of Woodstock, NH, and 0.7 mi upstream from Eastman Brook.	193	1940-77‡, 1978-79	11-30-79 12- 4-79 5- 2-80 6-30-80 7-16-80	648 393 1,230 130 123
01076000 Baker River	Pemigewasset River	Lat 43°47'46", long 71°50'42", Grafton County, 0.3 mi upstream from Halls Brook, and 1.8 mi southwest of Rumney, NH.	143	1929-77‡, 1978-79	11-29-79 5- 5-80 6-30-80	373 417 39.5
01081500 Merrimack River	Atlantic Ocean	Lat 43°25'26", long 71°39'12", Merrimack County, at Franklin Junction, NH, 1 mi downstream from confluence of Pemigewasset and Winnipesaukee Rivers.	-	1906-78‡, 1979	4-18-80 7-21-80	6,730 813
*01082000 Contoocook River	Merrimack River	Lat 42°51'45", long 71°57'35", Hillsborough County, 1,100 ft downstream from milldam, 1 mi south of Peterborough, NH, and 1.5 mi upstream from Nubanusit Brook.	68.1	1945-77‡, 1978	5- 6-80 9-12-80	106 10.7
*01085000 Contoocook River	do	Lat 43°09'10", long 71°51'24", Merrimack County, 1.6 mi downstream from Sand Brook, and 2.5 mi southwest of Henniker, NH.	368	1940-77‡, 1978-79	5-19-80 7-24-80	321 72.5
01088000 Contoocook River	do	Lat 43°17'12", long 71°35'56", Merrimack County, at Penacook, NH, 0.5 mi upstream from mouth.	766	1929-77‡, 1978-79	7- 3-80 8- 1-80	518 187
01088400 Merrimack River	Atlantic Ocean	Lat 43°12'32", long 71°31'51", Merrimack County, at bridge on State Highway 4 at Concord, NH.	-	1979	10-30-79 11-26-79 12-19-79 3-26-80 4-29-80 5-21-80 6-23-80 7-30-80 8-25-80	2,360 2,840 2,790 9,120 9,500 3,760 2,280 2,200 1,980
01091500 Piscataquog River	Merrimack River	Lat 43°00'58", long 71°33'03", Hillsborough County, 0.2 mi upstream from Harry Brook, 0.9 mi downstream from Glen Lake, and 2.5 mi east of Goffstown, NH.	202	1939-78‡, 1979	12-10-79 4-14-80 8- 5-80	200 845 48
*01094000 Souhegan River	do	Lat 42°51'27", long 71°30'24", Hillsborough County, at head of Wildcat Falls at Merrimack, NH, 1.5 mi upstream from mouth.	171	1909-76‡, 1979	11- 1-79 7- 1-80 9-15-80	208 338 13.1
		Connecticut River basin				
01140850 West Branch Ompompanoosuc River	Ompompanoosuc River	Lat 43°45'19", long 72°17'03", Orange County, at bridge on Route 132, 4.8 mi southeast of South Strafford, VT.	-	1979	10-10-79	39.7
01140950 Ompompanoosuc River	Connecticut River	Lat 43°49'56", long 72°15'13", Orange County, at covered bridge at Thetford Center, VT.	-	1979	10-10-79	30.8
01145000 Mascoma River	do	Lat 43°39'00", long 72°04'50", Grafton County, on right bank 45 ft downstream from Boston and Maine Railroad bridge, 0.9 mi east of West Canaan, 1.2 mi downstream from Indian River, 3.5 mi west of Canaan and at mile 19.3.	80.5	1939-78‡, 1979	7- 2-80	16.7

* Also a crest-stage partial-record station.
‡ Operated as a continuous-record gaging station.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)
ANDROSCOGGIN RIVER BASIN									
01052500 - DIAMOND RIVER NEAR WENTWORTH LOCATION, NH (LAT 44 52 40 LONG 071 03 25)									
NOV , 1979					MAY , 1980				
01...	1130	196	3.0	36	22...	1345	317	13.5	40
FEB , 1980					JUL				
12...	1100	45	.0	49	24...	1700	544	18.0	32
MAR					AUG				
19...	1200	57	.0	55	27...	1100	63	19.5	42
APR									
25...	1115	1130	3.5	28					
01053500 - ANDROSCOGGIN RIVER AT ERROL, NH (LAT 44 46 57 LONG 071 07 46)									
NOV , 1979					APR , 1980				
01...	1000	1450	6.0	31	25...	1330	1300	6.0	30
JAN , 1980					MAY				
03...	1645	1710	.0	23	22...	1000	1480	14.0	34
FEB					JUL				
12...	1130	1710	.5	35	24...	1800	1280	20.0	34
MAR					AUG				
19...	1000	1330	1.0	45	27...	0830	1420	20.0	32
01054000 - ANDROSCOGGIN RIVER NEAR GORHAM, NH (LAT 44 26 10 LONG 071 11 27)									
NOV , 1979					APR , 1980				
01...	0830	1680	6.0	85	25...	1445	1920	8.0	85
JAN , 1980					MAY				
04...	0815	1750	1.0	80	21...	1830	1490	15.0	104
FEB					AUG				
11...	1715	1860	1.0	101	26...	1800	1510	22.5	84
MAR									
19...	0900	1840	1.0	120					
SACO RIVER BASIN									
01064300 - ELLIS RIVER NEAR JACKSON, NH (LAT 44 13 12 LONG 071 15 00)									
OCT , 1979					APR , 1980				
31...	1220	26	4.5	30	16...	1235	68	1.5	35
DEC					JUN				
13...	1210	21	.0	22	02...	1145	22	9.0	37
JAN , 1980					JUL				
23...	1150	11	.0	36	07...	1100	9.7	12.0	36
MAR					AUG				
06...	1040	1.3	.0	48	19...	0900	8.3	12.0	36
01064400 - LUCY BROOK NEAR NORTH CONWAY, NH (LAT 44 04 10 LONG 071 10 30)									
OCT , 1979					APR , 1980				
31...	1600	7.8	6.5	20	16...	1505	42	2.0	17
DEC					JUN				
13...	1445	5.7	.5	18	02...	1320	4.0	10.0	23
JAN , 1980					JUL				
23...	1445	5.0	.0	16	07...	1325	1.5	15.0	24
MAR					AUG				
06...	1320	.60	.0	18	19...	1150	.67	13.0	26
01064500 - SACO RIVER NEAR CONWAY, NH (LAT 43 59 27 LONG 071 05 29)									
OCT , 1979					FEB , 1980				
29...	1430	770	6.0	34	27...	1430	249	.0	55
NOV					MAY				
28...	1330	2360	5.5	28	12...	1800	1230	12.0	34
DEC					JUL				
27...	1400	1120	.0	31	23...	1600	188	23.0	50
JAN , 1980					AUG				
29...	1415	397	.0	48	13...	1430	152	21.0	55

MISCELLANEOUS TEMPERATURE AND SPECIFIC CONDUCTANCE MEASUREMENTS

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)
SACO RIVER BASIN--Continued									
01065000 - OSSIPEE RIVER AT EFFINGHAM FALLS, NH (LAT 43 47 44 LONG 071 03 36)									
OCT , 1979					JUL , 1980				
30...	1500	510	10.0	34	03...	1255	449	22.0	32
JAN , 1980					AUG				
22...	1440	254	.0	51	18...	1000	140	21.0	35
APR					SEP				
15...	1435	2840	.5	38	24...	1435	286	19.0	36
PISCATAQUA RIVER BASIN									
01072100 - SALMON FALLS RIVER AT MILTON, NH (LAT 43 24 50 LONG 070 59 15)									
FEB , 1980					JUL , 1980				
14...	1040	58	4.5	--	11...	1045	45	21.0	52
MAY					SEP				
09...	1030	220	13.0	--	23...	1305	42	20.0	56
JUN									
17...	1245	45	20.0	49					
01073000 - OYSTER RIVER NEAR DURHAM, NH (LAT 43 08 55 LONG 070 57 56)									
JUN , 1980					SEP , 1980				
17...	1535	3.3	18.0	132	22...	1440	.69	19.0	240
AUG									
11...	1230	1.8	21.0	124					
01073500 - LAMPREY RIVER NEAR NEWMARKET, NH (LAT 43 06 09 LONG 070 57 11)									
NOV , 1979					MAY , 1980				
28...	1100	383	8.0	70	28...	1220	84	17.0	74
JAN , 1980					AUG				
28...	1055	89	.0	52	27...	0945	18	22.0	81
MAR					SEP				
04...	1345	860	.0	40	22...	1000	9.7	14.0	97
APR									
10...	1550	996	5.0	52					
01073600 - DUDLEY BROOK NEAR EXETER, NH (LAT 42 59 37 LONG 071 01 24)									
JAN , 1980					MAY , 1980				
28...	1300	.76	.0	40	28...	1435	1.1	18.0	220
MAR					JUL				
04...	1105	.29	.0	50	01...	1325	1.2	18.0	160
APR									
10...	1305	92	5.0	40					
25...	1150	5.3	9.0	49					
MERRIMACK RIVER BASIN									
01075000 - PEMIGEWASSET RIVER AT WOODSTOCK, NH (LAT 43 58 34 LONG 071 40 48)									
JUN , 1980					SEP , 1980				
30...	0920	130	15.5	45	09...	1345	65	16.5	52
01075800 - STEVENS BROOK NEAR WENTWORTH, NH (LAT 43 50 12 LONG 071 53 07)									
JAN , 1980					AUG , 1980				
03...	1215	.55	.0	--	18...	1015	.06	13.5	--
JUN					SEP				
05...	1215	3.7	--	28	10...	0930	.12	14.0	52
JUL									
01...	0845	1.3	14.0	35					
01076000 - BAKER RIVER NEAR RUMNEY, NH (LAT 43 47 46 LONG 071 50 42)									
JUN , 1980									
30...	1200	40	16.5	59					

MISCELLANEOUS TEMPERATURE AND SPECIFIC CONDUCTANCE MEASUREMENTS

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

MERRIMACK RIVER BASIN--Continued

01076500 - PEMIGEWASSET RIVER AT PLYMOUTH, NH (LAT 43 45 33 LONG 071 41 10)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)
OCT , 1979					MAY , 1980				
25...	1105	1460	10.0	38	22...	1015	1390	11.0	42
NOV					JUN				
27...	1100	13800	6.0	38	25...	0930	461	18.0	50
FEB , 1980					AUG				
20...	1145	190	1.0	88	20...	1010	202	17.5	68
APR					SEP				
21...	1120	2940	6.0	40	23...	0930	373	18.0	48

01077000 - SQUAM RIVER AT ASHLAND, NH (LAT 43 42 19 LONG 071 37 49)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)
JUN , 1980					JUL , 1980				
05...	1415	60	--	44	01...	1215	5.9	21.0	50

01078000 - SMITH RIVER NEAR BRISTOL, NH (LAT 43 34 04 LONG 071 44 54)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)
JAN , 1980					JUL , 1980				
03...	1500	72	.0	--	01...	1500	35	19.0	52
JUN					SEP				
05...	0930	214	--	35	12...	1030	10	14.5	65

01079600 - POORFARM BROOK NEAR GILFORD, NH (LAT 43 33 19 LONG 071 21 52)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)
OCT , 1979					MAY , 1980				
30...	1000	6.9	6.0	50	29...	1220	1.9	13.0	52
DEC					JUL				
12...	1050	6.0	3.5	51	02...	1400	2.3	15.0	60
JAN , 1980					AUG				
22...	1100	2.0	.0	40	15...	1340	.34	18.0	97
MAR					SEP				
05...	1015	.82	.0	56	24...	1000	.18	10.5	97
APR									
15...	1035	38	5.0	45					

01080500 - LAKE WINNIPESAUKEE OUTLET AT LAKEPORT, NH (LAT 43 32 57 LONG 071 27 54)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)
DEC , 1979					MAY , 1980				
12...	0855	777	4.5	48	29...	1040	299	15.0	53
APR , 1980									
15...	1730	1350	12.0	50					

01081000 - WINNIPESAUKEE RIVER AT TILTON, NH (LAT 43 26 31 LONG 071 35 20)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)
FEB , 1980					JUL , 1980				
04...	1020	268	.0	--	02...	0930	380	20.5	66
MAR									
07...	1355	295	3.0	67					

01083000 - NUBANUSIT BROOK NEAR PETERBOROUGH, NH (LAT 42 53 10 LONG 071 58 24)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)
OCT , 1979					JUL , 1980				
31...	1250	45	7.0	46	02...	1230	55	20.0	52
DEC					25...	1000	7.6	--	49
05...	1355	83	1.0	37	SEP				
MAR , 1980					05...	1145	5.3	21.0	--
06...	1350	63	.5	48					
MAY									
06...	0945	70	14.5	--					

01085500 - CONTOOCOOK R BL HOPKINTON DAM AT W HOPKINTON, NH (LAT 43 11 31 LONG 071 44 51)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)
OCT , 1979					MAY , 1980				
29...	1310	466	8.0	51	27...	1230	193	9.0	58
DEC					JUN				
10...	1130	696	.0	50	30...	1205	125	20.0	64
JAN , 1980					AUG				
21...	1120	383	.0	43	05...	1140	150	24.0	59
APR					SEP				
10...	1005	2160	4.0	60	15...	1115	54	17.0	72

MISCELLANEOUS TEMPERATURE AND SPECIFIC CONDUCTANCE MEASUREMENTS

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

MERRIMACK RIVER BASIN--Continued

01085800 - WEST BRANCH WARNER RIVER NEAR BRADFORD, NH (LAT 43 15 33 LONG 072 01 35)

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE, WATER (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE, WATER (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)
NOV , 1979					JUN , 1980				
13...	1430	9.3	6.0	28	04...	0805	9.7	12.0	34
DEC					JUL				
28...	0810	19	.5	23	09...	0740	2.0	14.0	35
FEB , 1980					AUG				
06...	0900	.91	.5	86	19...	0750	.61	16.0	45
MAR					SEP				
13...	0905	1.4	1.0	42	11...	0920	.46	16.0	45
APR									
22...	0850	15	4.5	40					

01087000 - BLACKWATER RIVER NEAR WEBSTER, NH (LAT 43 17 45 LONG 071 41 46)

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE, WATER (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE, WATER (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)
OCT , 1979					JUN , 1980				
29...	1035	146	7.0	46	30...	0940	46	19.0	51
JAN , 1980					AUG				
21...	0935	77	.0	47	04...	1145	37	23.0	56
APR					SEP				
14...	1040	1230	5.0	31	15...	0915	14	15.0	65
MAY									
27...	1020	95	9.0	53					

01089000 - SOUCOOK RIVER NEAR CONCORD, NH (LAT 43 14 22 LONG 071 27 44)

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE, WATER (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE, WATER (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)
JUN , 1980					AUG , 1980				
04...	1200	100	14.0	60	13...	0845	17	17.0	66
18...	0900	29	15.0	62	SEP				
JUL					03...	1010	6.7	22.0	78
03...	0825	30	16.0	59	16...	1430	4.7	14.0	81

01090800 - PISCATAQUOG RIVER BL EVERETT DAM, NR E WEARE, NH (LAT 43 05 29 LONG 071 39 36)

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE, WATER (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE, WATER (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)
NOV , 1979					JUN , 1980				
13...	1210	118	7.0	42	04...	1415	25	20.0	46
DEC					JUL				
28...	1330	180	1.5	50	09...	1320	23	21.0	45
FEB , 1980					AUG				
06...	1430	10	2.0	54	19...	1345	7.8	21.0	48
MAR									
13...	1445	84	2.0	65					

01092000 - MERRIMACK R NR GOFFS FALLS, BELOW MANCHESTER, NH (LAT 42 56 54 LONG 071 27 52)

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE, WATER (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE, WATER (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)
NOV , 1979					APR , 1980				
01...	1230	5010	5.0	98	11...	1410	25900	3.0	68
JAN , 1980					AUG				
21...	1430	5130	.0	84	06...	0800	291	28.0	113
MAR					SEP				
04...	0830	210	.0	90	16...	0800	179	24.0	86

01093800 - STONY BROOK TRIBUTARY NEAR TEMPLE, NH (LAT 42 51 36 LONG 071 50 00)

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE, WATER (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE, WATER (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)
OCT , 1979					APR , 1980				
02...	1255	26	13.5	22	22...	1200	7.5	6.5	24
NOV					JUN				
14...	1230	9.3	7.0	26	04...	1125	4.7	14.0	24
DEC					JUL				
28...	1055	10	.5	25	09...	1115	2.7	15.0	26
FEB , 1980					AUG				
06...	1200	3.5	.5	74	19...	1040	.43	15.0	32
MAR									
13...	1230	1.4	1.5	86					

01094000 - SOUHEGAN RIVER AT MERRIMACK, NH (LAT 42 51 27 LONG 071 30 24)

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE, WATER (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE, WATER (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)
NOV , 1979									
01...	1030	208	6.0	87					

MISCELLANEOUS TEMPERATURE AND SPECIFIC CONDUCTANCE MEASUREMENTS

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)
CONNECTICUT RIVER BASIN									
01127880 - BIG BROOK NEAR PITTSBURG, NH (LAT 45 08 06 LONG 071 12 23)									
NOV , 1979					APR , 1980				
08...	1540	13	4.5	40	21...	1540	51	2.0	31
DEC					JUN				
17...	1550	3.9	.0	40	02...	1530	4.6	--	40
JAN , 1980					24...	1630	4.4	--	43
29...	1600	3.1	.0	53	JUL				
MAR					28...	1630	13	18.0	38
10...	1640	1.6	.0	41	SEP				
26...	0930	4.4	.0	30	08...	1000	4.9	10.0	44
01128500 - CONNECTICUT R AT FIRST CONN LK NR PITTSBURG, NH (LAT 45 05 14 LONG 071 17 34)									
APR , 1980					JUL , 1980				
21...	1700	11	2.5	35	28...	1810	216	18.5	32
JUN					SEP				
25...	1415	54	13.0	30	08...	1200	283	18.0	32
01129200 - CONNECTICUT R BL INDIAN STREAM NR PITTSBURG, NH (LAT 45 02 25 LONG 071 26 37)									
DEC , 1979					JUL , 1980				
18...	0820	718	.0	56	28...	1500	584	16.0	40
APR , 1980					SEP				
22...	0900	324	1.0	36	08...	1430	452	--	42
JUN									
02...	1815	73	--	50					
25...	1520	146	17.5	42					
01129300 - HALLS STREAM NEAR EAST HEREFORD, QUEBEC (LAT 45 02 41 LONG 071 29 54)									
JUN , 1980					SEP , 1980				
03...	1100	39	--	75	08...	1630	32	14.5	80
24...	1230	48	17.5	75					
JUL									
28...	1345	105	19.5	62					
01129500 - CONNECTICUT RIVER AT NORTH STRATFORD, NH (LAT 44 44 56 LONG 071 37 50)									
JUN , 1980					SEP , 1980				
24...	0930	436	17.0	70	08...	1800	704	17.5	55
JUL									
28...	1200	1340	18.0	55					
01130000 - UPPER AMMONOOSUC RIVER NEAR GROVETON, NH (LAT 44 37 30 LONG 071 28 10)									
NOV , 1979					JUN , 1980				
08...	1030	369	5.0	37	03...	1400	253	--	38
JAN , 1980					26...	1900	--	22.0	40
29...	1045	75	.0	37	JUL				
MAR					28...	1100	--	18.0	36
10...	1050	63	.0	39	SEP				
APR					08...	1850	--	--	43
21...	0945	1020	4.5	36	09...	0900	101	12.5	45
01131500 - CONNECTICUT RIVER NEAR DALTON, NH (LAT 44 24 36 LONG 071 43 16)									
NOV , 1979					SEP , 1980				
09...	1125	2030	5.0	59	09...	1100	1370	17.0	63
APR , 1980									
22...	1235	4690	2.0	40					
01134500 - MOOSE RIVER AT VICTORY, VT (LAT 44 30 42 LONG 071 50 13)									
OCT , 1979					JUN , 1980				
29...	1515	82	3.5	35	19...	1315	27	--	96
DEC					AUG				
07...	1230	96	.5	50	11...	1100	37	19.0	--
JAN , 1980					SEP				
09...	1230	50	.0	--	10...	1330	23	18.0	--
FEB									
14...	1500	14	.0	--					

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)
CONNECTICUT RIVER BASIN--Continued									
01135000 - MOOSE RIVER AT ST. JOHNSBURY, VT (LAT 44 25 22 LONG 072 00 02)									
OCT , 1979 24...	1200	98	5.0	35	JUN , 1980 19...	1530	40	--	98
DEC 07...	1030	118	.5	60	JUL 21...	1445	21	27.0	--
FEB , 1980 15...	0930	17	.0	70	30...	0930	89	22.0	85
MAY 19...	1100	423	11.0	90	SEP 11...	1415	30	17.0	--
01135500 - PASSUMPSIC RIVER AT PASSUMPSIC, VT (LAT 44 21 56 LONG 072 02 23)									
FEB , 1980 15...	1145	84	.0	120	JUL , 1980 28...	1130	810	25.0	110
MAR 20...	1030	1370	1.0	100	30...	1400	313	23.0	100
JUN 20...	1330	203	--	122	SEP 10...	1045	171	16.0	--
01137500 - AMMONOOSUC RIVER AT BETHLEHEM JUNCTION, NH (LAT 44 16 08 LONG 071 37 52)									
DEC , 1979 18...	1445	57	.0	43	APR , 1980 22...	1525	246	1.0	28
JAN , 1980 30...	1315	46	.0	40	JUN 27...	1030	66	16.5	39
MAR 11...	1515	39	.0	--	SEP 09...	1215	49	13.0	42
01138000 - AMMONOOSUC RIVER NEAR BATH, NH (LAT 44 09 14 LONG 071 59 10)									
OCT , 1979 11...	0935	290	5.0	--	SEP , 1980 23...	0900	297	20.5	95
FEB , 1980 20...	1200	76	.0	--	25...	1230	207	13.0	--
JUN 12...	0950	278	11.0	70					
01139000 - WELLS RIVER AT WELLS RIVER, VT (LAT 44 09 03 LONG 072 03 55)									
JUN , 1980 20...	0900	40	--	110	SEP , 1980 25...	1130	58	13.0	90
JUL 30...	1630	26	23.0	100					
01139800 - EAST ORANGE BRANCH AT EAST ORANGE, VT (LAT 44 05 34 LONG 072 20 10)									
OCT , 1979 22...	1445	3.8	15.5	240	MAY , 1980 13...	1530	21	13.5	112
DEC 04...	1130	13	.0	150	JUL 24...	1015	5.1	18.0	95
FEB , 1980 21...	1200	3.4	.0	120	AUG 22...	1400	1.3	17.0	--
MAR 28...	1200	16	.5	110	SEP 15...	1400	6.1	14.0	100
APR 03...	1600	46	2.0	180					
01141500 - OMPOMPANOOSUC RIVER AT UNION VILLAGE, VT (LAT 43 47 23 LONG 072 15 19)									
JAN , 1980 14...	1400	83	.0	--	JUN , 1980 24...	1545	50	19.0	105
FEB 19...	1300	28	.0	--	SEP 24...	0900	19	17.0	100
01141800 - MINK BROOK NEAR ETNA, NH (LAT 43 42 08 LONG 072 11 15)									
FEB , 1980 25...	1345	.81	.0	--	AUG , 1980 18...	1250	.05	15.0	--
JUN 06...	0900	2.7	--	67	SEP 11...	1305	.09	12.5	124
JUL 10...	0915	.66	13.0	83					

MISCELLANEOUS TEMPERATURE AND SPECIFIC CONDUCTANCE MEASUREMENTS

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)
CONNECTICUT RIVER BASIN--Continued									
01142500 - AYERS BROOK AT RANDOLPH, VT (LAT 43 56 04 LONG 072 39 30)									
OCT , 1979 31...	1430	23	6.0	195	FEB , 1980 21...	0930	11	.0	90
NOV 27...	0830	156	9.5	110	MAR 24...	0930	103	.5	--
JAN , 1980 04...	1200	20	.0	110	APR 03...	1230	58	3.5	110
01144000 - WHITE RIVER AT WEST HARTFORD, VT (LAT 43 42 51 LONG 072 25 07)									
OCT , 1979 31...	1300	576	5.5	120	MAY , 1980 20...	1400	1240	14.0	110
NOV 27...	1100	5410	--	70	JUN 24...	1000	331	--	110
JAN , 1980 10...	1500	460	.0	90	AUG 21...	1030	139	20.0	--
FEB 25...	1100	249	.0	--	SEP 16...	1300	236	17.0	75
MAR 24...	0830	2230	.5	--	22...	1330	176	19.5	--
01144500 - CONNECTICUT RIVER AT WEST LEBANON, NH (LAT 43 38 47 LONG 072 18 46)									
FEB , 1980 07...	0950	3000	.0	110	SEP , 1980 22...	1500	10900	19.0	100
MAR 20...	1300	7760	1.0	120					
01145000 - MASCOMA RIVER AT WEST CANAAN, NH (LAT 43 39 00 LONG 072 04 50)									
OCT , 1979 01...	1045	21	13.0	--	JUL , 1980 10...	1215	18	20.0	50
JUL , 1980 02...	1300	15	19.5	57					
01150500 - MASCOMA RIVER AT MASCOMA, NH (LAT 43 39 01 LONG 072 11 05)									
OCT , 1979 01...	1530	29	17.0	--	MAY , 1980 08...	1430	184	12.5	--
JAN , 1980 09...	1130	96	.0	--	JUL 02...	1100	37	20.5	52
FEB 29...	1400	26	.0	--	SEP 11...	1100	31	18.0	55
01151500 - OTTAUQUECHEE RIVER AT NORTH HARTLAND, VT (LAT 43 36 09 LONG 072 21 17)									
AUG , 1980 20...	1345	33	19.0	--	SEP , 1980 23...	1535	58	20.0	90
01152500 - SUGAR RIVER AT WEST CLAREMONT, NH (LAT 43 23 15 LONG 072 21 45)									
FEB , 1980 01...	1100	112	.0	90	MAR , 1980 07...	1015	83	.5	155
01152800 - BLACK R AT COVERED BRIDGE, AT WEATHERSFIELD, VT (LAT 43 23 55 LONG 072 31 14)									
OCT , 1979 10...	1330	168	8.0	82	MAY , 1980 20...	1050	186	13.5	108
25...	1020	136	8.5	83	JUN 17...	1100	71	17.0	100
DEC 04...	1105	170	1.0	73	24...	1125	62	20.0	134
JAN , 1980 15...	1105	178	1.0	82	JUL 22...	1200	11	--	128
MAR 04...	1140	33	.0	126	24...	1110	128	21.1	114
APR 17...	1115	498	4.0	62	AUG 19...	1025	7.1	17.0	160
24...	1100	270	6.8	64	SEP 23...	1040	10.0	19.0	99

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE, WATER (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE, WATER (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)
CONNECTICUT RIVER BASIN--Continued									
01153000 - BLACK RIVER AT NORTH SPRINGFIELD, VT (LAT 43 20 00 LONG 072 30 55)									
OCT , 1979					MAY , 1980				
25...	1110	210	12.0	100	20...	1005	251	14.0	112
NOV					JUN				
13...	0950	258	6.0	83	17...	1250	108	21.0	108
DEC					24...	1205	71	22.0	148
04...	1205	209	.5	86	JUL				
JAN , 1980					24...	0950	62	24.8	120
15...	1300	193	.5	88	AUG				
MAR					19...	1130	37	19.0	170
04...	1330	54	.0	138	SEP				
APR					23...	0945	53	19.0	144
24...	0950	391	7.2	77					
01153500 - WILLIAMS RIVER AT BROCKWAYS MILLS, VT (LAT 43 12 31 LONG 072 31 05)									
NOV , 1979					JUN , 1980				
30...	1000	180	2.0	66	17...	1445	54	20.5	96
FEB , 1980					JUL				
26...	1100	26	.0	127	15...	1330	35	--	143
APR									
25...	0925	207	7.0	76					
01154000 - SAXTONS RIVER AT SAXTONS RIVER, VT (LAT 43 08 14 LONG 072 29 17)									
OCT , 1979					FEB , 1980				
25...	1215	86	10.5	72	26...	1230	27	.0	121
NOV					APR				
30...	1130	147	2.0	56	25...	1100	142	8.0	68
JAN , 1980					JUN				
16...	0910	72	.5	72	17...	1600	39	22.0	83
01155500 - WEST RIVER AT JAMAICA, VT (LAT 43 06 32 LONG 072 46 33)									
OCT , 1979					JUN , 1980				
18...	1200	244	8.0	45	18...	1010	76	16.0	50
NOV					JUL				
29...	1100	309	4.0	46	16...	0830	59	--	61
JAN , 1980					SEP				
16...	1250	188	5.0	52	20...	1135	36	15.0	62
APR									
24...	1125	354	6.5	42					
01156000 - WEST RIVER AT NEWFANE, VT (LAT 42 59 43 LONG 072 38 13)									
OCT , 1979					JUN , 1980				
18...	1420	507	9.5	47	18...	1240	245	19.0	52
JAN , 1980					JUL				
16...	1520	343	.5	52	16...	1555	85	--	67
MAR									
05...	1145	97	.5	74					
01157000 - ASHUELOT RIVER NEAR GILSUM, NH (LAT 43 02 21 LONG 072 16 14)									
NOV , 1979					SEP , 1980				
30...	1400	177	4.0	30	25...	1125	3.6	12.0	52
APR , 1980									
25...	1250	127	10.0	36					
01158000 - ASHUELOT RIVER BL SURRY MT DAM, NR KEENE, NH (LAT 42 59 40 LONG 072 18 40)									
DEC , 1979					APR , 1980				
05...	1155	148	2.0	32	21...	1155	797	8.5	--
JAN , 1980					JUN				
17...	1205	87	1.5	41	19...	1120	77	21.0	40
MAR					SEP				
06...	1020	22	--	58	25...	1025	17	18.0	48
01158600 - OTTER BROOK BELOW OTTER BROOK DAM, NR KEENE, NH (LAT 42 56 45 LONG 072 14 14)									
MAR , 1980					JUL , 1980				
06...	0850	13	1.0	57	17...	0930	1.5	--	46

MISCELLANEOUS TEMPERATURE AND SPECIFIC CONDUCTANCE MEASUREMENTS

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

CONNECTICUT RIVER BASIN--Continued

01161000 - ASHUELOT RIVER AT HINSDALE, NH (LAT 42 47 07 LONG 072 29 12)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)
JAN , 1980					JUL , 1980				
17...	0840	545	1.0	72	17...	0730	113	--	225
MAR					SEP				
05...	1405	123	.0	230	24...	1530	72	16.0	230
JUN									
18...	1445	289	21.0	123					

HUDSON RIVER BASIN

01329000 - BATTEN KILL AT ARLINGTON, VT (LAT 43 04 38 LONG 073 09 26)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)
OCT , 1979					MAR , 1980				
24...	0635	172	13.0	190	20...	0700	740	.5	146
NOV					APR				
21...	0640	211	6.0	176	21...	1240	456	8.5	165
DEC					MAY				
19...	0930	136	.0	185	21...	1345	218	13.0	175
JAN , 1980					SEP				
23...	0735	133	.0	93	24...	0800	81	14.0	212
FEB									
20...	1230	79	.5	236					

01334000 - WALLOOMSAC RIVER NEAR NORTH BENNINGTON, VT (LAT 42 54 47 LONG 073 15 25)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)
OCT , 1979					APR , 1980				
23...	0655	125	13.0	195	18...	0720	364	2.5	146
DEC					JUN				
19...	1320	121	.0	200	18...	0655	100	14.0	200
JAN , 1980					JUL				
23...	1205	86	1.0	149	24...	1236	77	20.5	190
MAR					SEP				
06...	1220	65	1.0	280	23...	0710	74	18.5	185

ST. LAWRENCE RIVER BASIN

04280000 - POULTNEY RIVER BELOW FAIR HAVEN, VT (LAT 43 37 40 LONG 073 18 50)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)
OCT , 1979					FEB , 1980				
31...	1020	171	5.0	80	20...	1245	30	.0	--
DEC					APR				
11...	1215	82	1.0	80	03...	0900	603	3.0	95
JAN , 1980					AUG				
04...	1000	39	.5	85	26...	1320	7.0	19.0	80

04282000 - OTTER CREEK AT CENTER RUTLAND, VT (LAT 43 36 13 LONG 073 00 49)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)
OCT , 1979					APR , 1980				
31...	0715	200	5.0	145	03...	1015	793	3.0	--
DEC					JUN				
11...	0930	264	1.0	80	25...	1030	117	19.0	110
JAN , 1980					SEP				
03...	1615	304	.0	110	24 ..	1200	193	17.5	100
FEB									
20...	1015	100	.5	120					

04282500 - OTTER CREEK AT MIDDLEBURY, VT (LAT 44 00 47 LONG 073 10 06)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)
OCT , 1979					APR , 1980				
25...	1130	653	12.0	185	01...	1300	2230	3.0	--
DEC					MAY				
10...	1300	578	.0	180	15...	1300	904	12.5	102
JAN , 1980					AUG				
03...	1400	530	.0	170	13...	1200	290	19.0	--
FEB					SEP				
20...	0800	232	.0	180	24...	1230	318	17.0	--

MISCELLANEOUS TEMPERATURE AND SPECIFIC CONDUCTANCE MEASUREMENTS

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

ST. LAWRENCE RIVER BASIN--Continued

04284000 - JAIL BRANCH AT EAST BARRE, VT (LAT 44 09 30 LONG 072 26 44)

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE, WATER (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE, WATER (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)
OCT , 1979					APR , 1980				
22...	1300	9.5	16.0	125	03...	1700	87	3.0	--
DEC					MAY				
04...	1000	24	.0	200	20...	0800	68	14.0	90
FEB , 1980					JUL				
19...	1000	3.8	.0	95	24...	1330	10	23.0	100
MAR					SEP				
31...	1530	146	2.5	--	15...	1230	21	13.5	110

04285500 - NORTH BRANCH WINOOSKI RIVER AT WRIGHTSVILLE, VT (LAT 44 17 58 LONG 072 34 45)

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE, WATER (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE, WATER (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)
OCT , 1979					MAY , 1980				
19...	1430	100	6.0	43	13...	1100	132	13.5	100
DEC					AUG				
04...	1500	102	.5	45	12...	1330	16	18.0	--
JAN , 1980					28...	1130	25	19.0	--
07...	0845	37	.0	50	SEP				
FEB					17...	1100	63	14.0	35
19...	1600	14	.0	60					

04286000 - WINOOSKI RIVER AT MONTPELIER, VT (LAT 44 15 23 LONG 072 35 36)

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE, WATER (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE, WATER (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)
OCT , 1979					FEB , 1980				
16...	1015	447	6.5	104	19...	1430	178	.0	100
DEC					MAY				
12...	1000	367	1.0	90	05...	1315	438	11.5	96
JAN , 1980					SEP				
03...	0800	346	.0	95	17...	1440	178	14.0	100

04287000 - DOG RIVER AT NORTHFIELD FALLS, VT (LAT 44 10 58 LONG 072 38 27)

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE, WATER (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE, WATER (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)
OCT , 1979					MAY , 1980				
24...	1350	180	12.0	97	05...	1000	105	8.0	135
DEC					JUN				
12...	0830	87	1.5	85	23...	1020	37	--	103
JAN , 1980					JUL				
03...	0955	53	.0	80	25...	1430	21	21.0	84
FEB					AUG				
12...	0940	18	.0	--	28...	1445	14	20.0	--
MAR					SEP				
31...	1330	239	3.0	100	30...	0845	16	11.5	80
APR									
01...	0820	191	2.0	90					

04288000 - MAD RIVER NEAR MORETOWN, VT (LAT 44 16 42 LONG 072 44 37)

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE, WATER (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE, WATER (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)
OCT , 1979					MAY , 1980				
16...	1400	357	6.5	58	14...	1530	244	12.0	98
19...	1220	248	6.0	55	JUN				
DEC					13...	1130	90	14.0	95
10...	1100	151	.0	45	JUL				
JAN , 1980					23...	1100	147	24.0	--
03...	1145	109	.0	50	SEP				
FEB					02...	1045	71	20.0	--
12...	1200	29	.0	65					
MAR									
25...	0900	320	.0	--					

04289000 - LITTLE RIVER NEAR WATERBURY, VT (LAT 44 22 12 LONG 072 46 11)

DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE, WATER (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	DATE	TIME	STREAMFLOW, INSTANTANEOUS (CFS)	TEMPERATURE, WATER (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)
OCT , 1979					FEB , 1980				
19...	1100	561	10.5	39	12...	1400	93	.0	--
NOV					MAR				
26...	1400	55	9.5	--	24...	1600	53	.5	--
JAN , 1980									
02...	1000	552	2.5	60					

ST. LAWRENCE RIVER BASIN--Continued

04290500 - WINOOSKI RIVER NEAR ESSEX JUNCTION, VT (LAT 44 28 44 LONG 073 08 21)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)
OCT , 1979					FEB , 1980				
23...	1300	1740	15.0	120	11...	1550	89	.0	105
NOV					MAR				
26...	1215	1910	9.5	120	24...	1500	3020	.5	120
JAN , 1980									
02...	1245	1080	1.0	110					

04292000 - LAMOILLE RIVER AT JOHNSON, VT (LAT 44 37 22 LONG 072 40 50)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)
OCT , 1979					MAR , 1980				
23...	1115	366	11.0	135	25...	1130	900	.5	--
DEC					MAY				
06...	1320	393	2.0	115	07...	1445	743	12.0	105
JAN , 1980					JUN				
17...	1630	390	.0	105	17...	1045	205	--	115
FEB					SEP				
13...	1045	209	.0	100	08...	1100	80	16.0	105

04292500 - LAMOILLE RIVER AT EAST GEORGIA, VT (LAT 44 40 45 LONG 073 04 23)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)
OCT , 1979					MAR , 1980				
17...	1100	894	5.5	89	25...	1130	2300	.0	95
DEC					MAY				
06...	1030	950	1.5	100	14...	1300	753	11.5	135
JAN , 1980					JUN				
07...	1545	350	.0	95	17...	1345	436	--	112
FEB					SEP				
13...	1145	430	.0	80	04...	1215	1170	19.0	--

04293000 - MISSISQUOI RIVER NEAR NORTH TROY, VT (LAT 44 58 22 LONG 072 23 15)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)
OCT , 1979					MAY , 1980				
18...	0930	197	5.5	43	08...	1400	400	11.0	67
NOV					JUL				
29...	1300	360	5.0	--	15...	0915	33	26.0	80
DEC					23...	1600	59	24.0	--
05...	0830	154	.0	78	SEP				
JAN , 1980					11...	1100	45	16.5	--
08...	1200	62	.0	100					
FEB									
13...	1530	34	.0	85					

04293500 - MISSISQUOI RIVER NEAR EAST BERKSHIRE, VT (LAT 44 57 30 LONG 072 41 55)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)
OCT , 1979					FEB , 1980				
17...	1345	574	5.5	63	13...	1400	100	.0	85
NOV					JUL				
29...	1010	1680	5.0	75	14...	1530	97	26.0	100
JAN , 1980					SEP				
08...	1030	270	.0	80	08...	1245	248	17.0	--

04296500 - CLYDE RIVER AT NEWPORT, VT (LAT 44 56 22 LONG 072 11 23)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE, WATER (DEG C)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)
OCT , 1979					JUN , 1980				
18...	1400	15	9.0	125	18...	0830	11	--	104
30...	1000	15	6.5	155	SEP				
MAY , 1980					09...	1400	14	19.0	--
09...	1000	33	10.0	105					

GROUND-WATER WELLS, BY COUNTY, FOR WHICH RECORDS ARE PUBLISHED

NEW HAMPSHIRE	Page
CHESHIRE COUNTY	
Keene KEW 2	162
COOS COUNTY	
Errol ETW 1	162
Lancaster LCW 1	162
HILLSBOROUGH COUNTY	
Bedford BIW 1	163
Bedford BIW 2	163
Bedford BIW 3	163
Merrimack MKW 22	164
Merrimack MKW 85	164
Merrimack MKW 86	164
Milford MOW 36	165
Nashua NAW 143	165
Nashua NAW 216	165
Nashua NAW 217	166
Nashua NAW 218	166
MERRIMACK COUNTY	
Concord CVW 1	166
Concord CVW 2	167
Concord CVW 3	167
Concord CVW 4	167
Franklin FKW 1	167
Hooksett HTW 5	168
New London NLW 1	168
Warner WCW 1	168
Warner WCW 2	169
Warner WCW 3	169
STRAFFORD COUNTY	
Lee LIW 1	169

VERMONT	Page
BENNINGTON COUNTY	
Pownal PQW 1	170
CHITTENDEN COUNTY	
Milton MJW 3	170
ESSEX COUNTY	
Brighton BIW 1	170
FRANKLIN COUNTY	
Berkshire BKW 1	171
LAMOILLE COUNTY	
Morristown MPW 1	171
ORANGE COUNTY	
West Fairlee WOW 1	171
ORLEANS COUNTY	
Glover GLW 1	172
RUTLAND COUNTY	
Pittsford PFW 8	172
WASHINGTON COUNTY	
Middlesex MHW 3	172
Montpelier MMW 2	173
Waitsfield WAW 2	173
Waitsfield WAW 3	173
WINDSOR COUNTY	
Chester CKW 1	174
Hartland HLW 54	174
Rochester RJW 1	174

CHESHIRE COUNTY

425543072175801. Local number, KEW 2.

LOCATION.--Lat 42°55'43", long 72°17'58", Hydrologic Unit 01080201, east side of State Highway 12, about 0.5 mi (0.8 km) north of State Highway 9, and 1.1 mi (1.8 km) southwest of the center of Keene.

Owner: New Hampshire Department of Public Works and Highways.

AQUIFER.--Sand of Pleistocene age.

WELL CHARACTERISTICS.--Bored, unused water-table well, diameter 2 in (0.05 m), depth 18 ft (5.5 m).

DATUM.--Altitude of land-surface datum is 475 ft (145 m). Measuring point: Top of casing, 4.5 ft (1.37 m) above land-surface datum.

PERIOD OF RECORD.--August 1963 to current year. Prior to January 1973, published in New Hampshire Hydrologic-Data Report No. 3.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.5 ft (0.15 m) below land-surface datum, Nov. 28, 1963; lowest measured, 6.23 ft (1.90 m) below land-surface datum, Sept. 27, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22, 1979	3.27	JAN 24, 1980	3.84	APR 24, 1980	2.83	JUL 25, 1980	4.86
NOV 24	3.31	FEB 22	4.59	MAY 23	3.88	AUG 22	5.05
DEC 21	3.63	MAR 24	1.81	JUN 24	4.43	SEP 23	5.20

COOS COUNTY

444733071094901. Local number, ETW 1.

LOCATION.--Lat 44°47'33", long 71°09'49", Hydrologic Unit 01040001, southwest side of State Highway 26, 1.8 mi (2.9 km) northwest of the center of Errol.

Owner: U.S. Geological Survey.

AQUIFER.--Very fine sand and silt of Pleistocene age.

WELL CHARACTERISTICS.--Bored, unused water-table well, diameter 1.25 in (0.03 m), depth 30 ft (9.14 m).

DATUM.--Altitude of land-surface datum is 1,245 ft (379 m). Measuring point: Top of casing, 3.00 ft (0.91 m) above land-surface datum.

PERIOD OF RECORD.--November 1966 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.4 ft (2.87 m) below land-surface datum, May 22, 1969; lowest measured, 14.1 ft (4.30 m) below land-surface datum, Feb. 22, 1975.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22, 1979	12.7	FEB 22, 1980	13.3	MAY 24, 1980	12.2	AUG 23, 1980	12.9
DEC 22	13.2	MAR 22	13.2	JUN 25	12.6	SEP 20	12.9
JAN 25, 1980	12.6	APR 26	12.3	JUL 21	12.6		

442830071321001. Local number, LCW 1.

LOCATION.--Lat 44°28'30", long 71°32'10", Hydrologic Unit 01080101, in gravel pit about 1,100 ft (335 m) southwest of Middle Street, 2.2 mi (3.5 km) southeast of U.S. Highway 3, and 2.0 mi (3.2 km) southeast of the center of Lancaster.

Owner: Town of Lancaster.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Driven, unused water-table well, diameter 2.5 in (0.06 m), depth 30 ft (9 m).

DATUM.--Altitude of land-surface datum is 940 ft (287 m). Measuring point: Top of casing, 1.0 ft (0.30 m) above land-surface datum.

PERIOD OF RECORD.--November 1966 to April 1980 (discontinued).

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, flowing at 1.0 ft (0.30 m) above land-surface datum, April 1970, Apr. 28, 1972; lowest measured, 6.93 ft (2.11 m) below land-surface datum, July 24, 1970.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1979	2.20	DEC 22, 1979	1.75	FEB 23, 1980	1.90	APR 24, 1980	1.80
NOV 23	1.90	JAN 25, 1980	1.80				

HILLSBOROUGH COUNTY

425811071304001. Local number, BIW 1.
LOCATION.--Lat 42°58'11", long 71°30'40", Hydrologic Unit 01070002, 24 ft (7.3 m) southwest of edge of pavement of State Highway 114, about 0.85 mi (1.37 km) northwest of intersection of State Highway 101, and 1.7 mi (2.7 km) north of the center of Bedford.
Owner: New Hampshire Department of Public Works and Highways.
AQUIFER.--Fine sand of Pleistocene age.
WELL CHARACTERISTICS.--Driven, unused water-table well, diameter 2 in (0.05 m), depth 8.9 ft (2.71 m).
DATUM.--Altitude of land-surface datum is 255 ft (78 m). Measuring point: Top of casing, 3.1 ft (0.94 m) above land-surface datum.
PERIOD OF RECORD.--December 1965 to July 1980 (discontinued).
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.68 ft (0.51 m) below land-surface datum, Mar. 21, 1969, Mar. 23, 1971; lowest measured, 7.73 ft (2.36 m) below land-surface datum, Feb. 25, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1979	6.14	DEC 26, 1979	6.67	FEB 24, 1980	7.17	APR 25, 1980	6.10
NOV 26	6.19	JAN 24 1980	6.78	MAR 25	6.89	JUN 26	6.14

425811071304002. Local number, BIW 2.
LOCATION.--Lat 42°58'11", long 71°30'40", Hydrologic Unit 01070002, 49 ft (14.9 m) southwest of edge of pavement of State Highway 114, about 0.85 mi (1.37 km) northwest of intersection of State Highway 101, and 1.7 mi (2.7 km) north of the center of Bedford.
Owner: New Hampshire Department of Public Works and Highways.
AQUIFER.--Fine sand of Pleistocene age.
WELL CHARACTERISTICS.--Driven, unused water-table well, diameter 2 in (0.05 m), depth 9 ft (2.7 m).
DATUM.--Altitude of land-surface datum is 255 ft (78 m). Measuring point: Top of casing, 3.1 ft (0.94 m) above land-surface datum.
PERIOD OF RECORD.--December 1965 to May 1968; February 1970 to July 1980 (discontinued).
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.38 ft (0.42 m) below land-surface datum, Mar. 25, 1971; lowest measured, dry many times 1971-80.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1979	DRY	JAN 24, 1980	DRY	MAR 25, 1980	DRY	JUN 26, 1980	DRY
NOV 26	DRY	FEB 24	DRY	APR 25	DRY		

425811071304003. Local number, BIW 3.
LOCATION.--Lat 42°58'11", long 70°30'40", Hydrologic Unit 01070002, 100 ft (30 m) southwest of edge of pavement of State Highway 114, about 0.85 m (1.37 km) northwest of intersection of State Highway 101, and 1.7 mi (2.7 km) north of the center of Bedford.
Owner: New Hampshire Department of Public Works and Highways.
AQUIFER.--Fine sand of Pleistocene age.
WELL CHARACTERISTICS.--Driven, unused water-table well, diameter 2 in (0.05 m), depth 9 ft (2.7 m).
DATUM.--Altitude of land-surface datum is 255 ft (78 m). Measuring point: Top of casing, 3.1 ft (0.94 m) above land-surface datum.
PERIOD OF RECORD.--December 1965 to May 1968; February 1970 to July 1980 (discontinued).
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.50 ft (0.76 m) below land-surface datum, Mar. 23, 1971; lowest measured, dry at 8.8 ft (2.68 m) below land-surface datum, Jan. 24 and Feb. 24, 1980.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1979	8.60	DEC 26, 1979	8.75	FEB 24, 1980	DRY	APR 25, 1980	7.69
NOV 26	8.71	JAN 24 1980	DRY	MAR 25	8.49	JUN 26	8.54

HILLSBOROUGH COUNTY--Continued

425303071283701. Local number, MKW 22.
LOCATION.--Lat 42°53'03", long 71°28'37", Hydrologic Unit 01070002, north side of Damon Clinic on west side of U.S. Highway 3, about 400 ft (122 m) south of Bedford Road, in Reeds Ferry in Merrimack.
Owner: H. A. Damon.
AQUIFER.--Gravel of Pleistocene age.
WELL CHARACTERISTICS.--Dug, unused water-table well, diameter 36 in (0.91 m), depth 16.9 ft (5.15 m).
DATUM.--Altitude of land-surface datum is about 195 ft (59 m). Measuring point: Bottom rim of hand pump, 0.80 ft (0.24 m) above land-surface datum.
PERIOD OF RECORD.--November 1958 to current year. Prior to May 1966, published in New Hampshire Basic-Data Report No. 2, Ground-Water Series.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.96 ft (1.21 m) below land-surface datum, Mar. 30, 1962; lowest measured, 12.57 ft (3.83 m) below land-surface datum, Nov. 20, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1979	7.43	JAN 24, 1980	6.78	APR 25, 1980	5.95	JUL 28, 1980	9.70
NOV 26	6.89	FEB 25	10.14	MAY 27	7.00	AUG 25	8.11
DEC 26	6.67	MAR 25	9.91	JUN 26	8.89	SEP 24	10.12

425339071281501. Local number, MKW 85.
LOCATION.--Lat 42°53'39", long 71°28'15", Hydrologic Unit 01070002, 260 ft (79 m) west of U.S. Highway 3, about 0.65 mi (1.05 km) northeast of intersection of Bedford Road, near Reeds Ferry in Merrimack.
Owner: New Hampshire Department of Fish and Game.
AQUIFER.--Sand of Pleistocene age.
WELL CHARACTERISTICS.--Bored, unused water-table well, diameter 1.00 in (0.03 m), depth 23 ft (7.0 m).
DATUM.--Altitude of land-surface datum is 180 ft (55 m). Measuring point: Top of casing is at land-surface datum.
PERIOD OF RECORD.--August 1964 to July 1980 (discontinued). Prior to June 1966, published in New Hampshire Basic-Data Report No. 2, Ground-Water Series.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.92 ft (2.41 m) below land-surface datum, Mar. 29, 1977; lowest measured, 11.23 ft (3.42 m) below land-surface datum, Nov. 18, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1979	9.41	DEC 26, 1979	9.90	FEB 24, 1980	10.40	APR 25, 1980	8.88
NOV 26	9.41	JAN 24 1980	10.05	MAR 25	10.02	JUN 26	9.78

425343071281701. Local number, MKW 86.
LOCATION.--Lat 42°53'43", long 71°28'17", Hydrologic Unit 01070002, 100 ft (30 m) west of edge of pavement of southbound lane of Everett Turnpike, about 0.72 mi (1.16 km) north of Bedford Road overpass, near Reeds Ferry in Merrimack.
Owner: New Hampshire Department of Public Works and Highways.
AQUIFER.--Sand of Pleistocene age.
WELL CHARACTERISTICS.--Bored, unused water-table well, diameter 1.25 in (0.03 m), depth 13 ft (3.96 m).
DATUM.--Altitude of land-surface datum is 175 ft (53 m). Measuring point: Top of casing, 0.2 ft (0.06 m) above land-surface datum.
PERIOD OF RECORD.--September 1964 to July 1980 (discontinued). Prior to June 1966, published in New Hampshire Basic-Data Report No. 2, Ground-Water Series.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.34 ft (0.10 m) below land-surface datum, Apr. 26, 1973; lowest measured, 3.60 ft (1.10 m) below land-surface datum, Nov. 8, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1979	2.25	JAN 24, 1980	2.81	MAR 25, 1980	3.05	MAY 27, 1980	1.90
NOV 26	2.20	FEB 24	3.37	APR 25	1.78	JUN 26	2.35
DEC 26	2.20						

HILLSBOROUGH COUNTY--Continued

425024071413001. Local number, MOW 36.

LOCATION.--Lat 42°50'24", long 71°41'30", Hydrologic Unit 01070002, 85 ft (26 m) from north side of Old Wilton Road, about 550 ft (108 m) west of the intersection of State Highway 101, and 2.2 mi (3.5 km) west of the center of Milford.

Owner: Leonard Cushing.

AQUIFER.--Sand of Pleistocene age.

WELL CHARACTERISTICS.--Dug, unused water-table well, diameter 36 in (0.91 m), depth 14.6 ft (4.55 m), lined with concrete.

DATUM.--Altitude of land-surface datum is about 265 ft (81 m). Measuring point: Top of concrete casing on south side of well, 1.60 ft (0.49 m) above land-surface datum.

PERIOD OF RECORD.--January 1962 to current year. Prior to May 1966, published in New Hampshire Basic-Data Report No. 2, Ground-Water Series.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.68 ft (1.73 m) below land-surface datum, Mar. 29, 1963; lowest measured, 12.30 ft (3.75 m) below land-surface datum, Nov. 18, 1978.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1979	7.88	JAN 24, 1980	8.81	APR 25, 1980	7.39	JUL 28, 1980	9.47
NOV 26	7.76	FEB 25	9.64	MAY 27	8.11	AUG 22	9.15
DEC 26	8.29	MAR 25	8.98	JUN 24	9.17	SEP 23	10.20

424752071315201. Local number, NAW 143.

LOCATION.--Lat 42°47'52", long 71°31'52", Hydrologic Unit 01070002, north side of State Highway 101-A, about 3.0 mi (4.8 km) west of U.S. Highway 3 opposite Round Pond, and 3.9 mi (6.3 km) west-northwest of the center of Nashua.

Owner: Roland Cadorette.

AQUIFER.--Sand of Pleistocene age.

WELL CHARACTERISTICS.--Driven, unused water-table well, diameter 1.25 in (0.03 m), depth 13.0 ft (3.96 m).

DATUM.--Altitude of land-surface datum is 200 ft (61 m). Measuring point: Top of casing, 1.5 ft (0.46 m) above land-surface datum.

PERIOD OF RECORD.--December 1958 to August 1959; January 1962 to July 1980 (discontinued). Prior to May 1966, published in New Hampshire Basic-Data Report No. 2, Ground-Water Series.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.20 ft (1.89 m) below land-surface datum, May 29, 1973; lowest measured, 11.65 ft (3.55 m) below land-surface datum, June 25, 1975.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1979	7.33	JAN 24, 1980	7.54	APR 25, 1980	7.41	JUL 28, 1980	8.43
NOV 26	7.56	FEB 25	8.21	MAY 27	7.74	AUG 25	8.51
DEC 26	8.00	MAR 25	8.06	JUN 26	8.20	SEP 24	9.00

424800071295001. Local number, NAW 216.

LOCATION.--Lat 42°48'00", long 71°29'50", Hydrologic Unit 01070002, 222 ft (68 m) east of edge of pavement of northbound lane of Everett Turnpike, about 0.63 mi (1.01 km) north of Tinker Road overpass, and 2.8 mi (4.5 km) northwest of the center of Nashua.

Owner: Pennichuck Water Works.

AQUIFER.--Sand of Pleistocene age.

WELL CHARACTERISTICS.--Bored, unused water-table well, diameter 2 in (0.05 m), depth 37.0 ft (11.28 m).

DATUM.--Altitude of land-surface datum is 205 ft (62 m). Measuring point: Top of casing, 3.08 ft (0.94 m) above land-surface datum.

PERIOD OF RECORD.--October 1964 to December 1968; February 1970 to July 1980 (discontinued). Prior to June 1966, published in New Hampshire Basic-Data Report No. 2, Ground-Water Series.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 28.73 ft (8.76 m) below land-surface datum, July 17, 1978; lowest measured, 35.42 ft (10.80 m) below land-surface datum, Nov. 18, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1979	30.09	DEC 26, 1979	30.43	FEB 24, 1980	30.64	APR 25, 1980	29.25
NOV 26	30.06	JAN 24 1980	30.56	MAR 25	30.28	JUN 26	30.27

HILLSBOROUGH COUNTY--Continued

424801071294801. Local number, NAW 217.
LOCATION.--Lat 42°48'01", long 71°29'48", Hydrologic Unit 01070002, 410 ft (125 m) east of edge of pavement of northbound lane of Everett Turnpike, about 0.63 mi (1.01 km) north of Tinker Road overpass, and 2.8 mi (4.51 km) northwest of the center of Nashua.
Owner: Pennichuck Water Works.
AQUIFER.--Sand of Pleistocene age.
WELL CHARACTERISTICS.--Bored, unused water-table well, diameter 2 in (0.05 m), depth 41.65 ft (12.69 m).
DATUM.--Altitude of land-surface datum is 205 ft (62 m). Measuring point: Top of casing, 3.0 ft (0.91 m) above land-surface datum.
PERIOD OF RECORD.--October 1964 to May 1968; December 1969 to July 1980 (discontinued). Prior to June 1966, published in New Hampshire Basic-Data Report No. 2, Ground-Water Series.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 27.49 ft (8.38 m) below land-surface datum, July 17, 1978; lowest measured, 34.07 ft (10.38 m) below land-surface datum, Nov. 18, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1979	28.78	DEC 26, 1979	29.05	FEB 24, 1980	29.41	APR 25, 1980	28.08
NOV 26	28.77	JAN 24 1980	29.31	MAR 25	28.89	JUN 26	28.91

424800071295301. Local number, NAW 218.
LOCATION.--Lat 42°48'00", long 71°29'53", Hydrologic Unit 01070002, 57 ft (17.4 m) east of edge of pavement of northbound lane of Everett Turnpike, about 0.63 mi (1.01 km) north of Tinker Road overpass, and 2.8 mi (4.5 km) northwest of the center of Nashua.
Owner: New Hampshire Department of Public Works and Highways.
AQUIFER.--Sand of Pleistocene age.
WELL CHARACTERISTICS.--Bored, unused water-table well, diameter 2 in (0.05 m), depth 42.5 ft (12.95 m).
DATUM.--Altitude of land-surface datum is 205 ft (62 m). Measuring point: Top of casing, 3.1 ft (0.94 m) above land-surface datum.
PERIOD OF RECORD.--October 1964 to current year. Prior to June 1966, published in New Hampshire Basic-Data Report No. 2, Ground-Water Series.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 26.39 ft (8.04 m) below land-surface datum, July 17, 1978; lowest measured, 33.10 ft (10.09 m) below land-surface datum, Nov. 25, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1979	27.87	JAN 24, 1980	28.13	APR 25, 1980	26.92	AUG 25, 1980	28.74
NOV 26	27.82	FEB 24	28.20	JUN 26	28.00	SEP 24	29.27
DEC 26	28.08	MAR 25	28.05	JUL 28	27.65		

MERRIMACK COUNTY

431526071345501. Local number, CVW 1.
LOCATION.--Lat 43°15'26", long 71°34'55", Hydrologic Unit 01070002, at south side of Bog Road, about 750 ft (230 m) west of intersection of U.S. Highways 3 and 4 and Bog Road, and 1.9 mi (3.1 km) southeast of Penacook.
Owner: U.S. Geological Survey.
AQUIFER.--Sand of Pleistocene age.
WELL CHARACTERISTICS.--Driven observation water-table well, diameter 3/4 in (0.02 m), depth 10.8 ft (3.3 m), screened 8.8 ft (2.7 m) to 10.8 ft (3.3 m).
DATUM.--Altitude of land-surface datum is 345 ft (105 m). Measuring point: Top of casing, 2.80 ft (0.85 m) above land-surface datum.
PERIOD OF RECORD.--September 1955 to March 1980 (discontinued). Prior to January 1973, published in Ground-Water Levels in United States, Northeastern States, Geological Survey Water-Supply Paper Series.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.09 ft (0.03 m) below land-surface datum, Apr. 9, 1960; lowest measured, 7.32 ft (2.23 m) below land-surface datum, Nov. 1, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1979	4.01	DEC 26, 1979	4.08	JAN 24, 1980	4.20	FEB 25, 1980	4.93
NOV 26	4.00						

MERRIMACK COUNTY--Continued

431224071303601. Local number, CVW 2.

LOCATION.--Lat 43°12'24", long 71°30'36", Hydrologic Unit 01070002, about 100 ft (30 m) north of the Federal Aeronautics Administration Building at Concord Municipal Airport.

Owner: U.S. Geological Survey.

AQUIFER.--Sand of Pleistocene age.

WELL CHARACTERISTICS.--Bored, unused water-table well, diameter 2 in (0.05 m), depth 60 ft (18.3 m).

DATUM.--Altitude of land-surface datum is 340 ft (104 m). Measuring point: Top of casing, 3.00 ft (0.91 m) above land-surface datum.

PERIOD OF RECORD.--August 1963 to May 1965, August 1967 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 36.85 ft (11.23 m) below land-surface datum, Aug. 27, 1973; lowest measured, 44.62 ft (13.60 m) below land-surface datum, Aug. 1, 1967.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1979	39.48	JAN 24, 1980	39.98	APR 28, 1980	40.55	JUL 28, 1980	41.10
NOV 26	39.76	FEB 25	40.84	MAY 27	40.73	AUG 25	41.23
DEC 26	39.83	MAR 25	40.33	JUN 27	40.93	SEP 24	41.38

431248071290201. Local number, CVW 3.

LOCATION.--Lat 43°12'48", long 71°29'02", Hydrologic Unit 01070002, at northwest corner of intersection of State Highway 106 and Pembroke Road, and 2.8 mi (4.5 km) east of the State House in Concord.

Owner: U.S. Geological Survey.

AQUIFER.--Very fine sand of Pleistocene age.

WELL CHARACTERISTICS.--Bored, unused water-table well, diameter 1.25 in (0.03 m), depth 72.7 ft (22.15 m).

DATUM.--Altitude of land-surface datum is 350 ft (107 m). Measuring point: Top of casing, 2.30 ft (0.70 m) above land-surface datum.

PERIOD OF RECORD.--November 1966 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 55.56 ft (16.93 m) below land-surface datum, Sept. 27, 1973; lowest measured, 59.96 ft (18.28 m) below land-surface datum, Jan. 30, 1967.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1979	56.81	JAN 24, 1980	56.60	APR 28, 1980	57.53	JUL 28, 1980	57.54
NOV 26	56.41	FEB 25	57.50	MAY 28	57.57	AUG 25	57.56
DEC 26	56.58	MAR 25	57.38	JUN 27	57.33	SEP 24	57.74

431049071324301. Local number, CVW 4.

LOCATION.--Lat 43°10'49", long 71°32'43", Hydrologic Unit 01070002, north side of Iron Works Road, about 700 ft (213 m) west of South Street, and 1.8 mi (2.9 km) southwest of the State House in Concord.

Owner: U.S. Geological Survey.

AQUIFER.--Lacustrine silty fine sands and clays of Pleistocene age.

WELL CHARACTERISTICS.--Bored, unused water-table well, diameter 1.25 in (0.03 m), depth 40.71 ft (12.41 m).

DATUM.--Altitude of land-surface datum is 285 ft (87 m). Measuring point: Top of casing, 3.8 ft (1.16 m) above land-surface datum.

PERIOD OF RECORD.--November 1966 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 13.93 ft (4.25 m) below land-surface datum, Apr. 23, 1969; lowest measured, 19.80 ft (6.04 m) below land-surface datum, Dec. 26, 1978.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1979	17.88	JAN 24, 1980	18.09	APR 25, 1980	17.43	JUL 28, 1980	18.88
NOV 26	17.51	FEB 25	18.81	MAY 27	17.52	AUG 25	19.10
DEC 26	17.75	MAR 25	18.44	JUN 27	18.28	SEP 24	19.58

432428071390701. Local number, FKW 1.

LOCATION.--Lat 43°24'28", long 71°39'07", Hydrologic Unit 01070002, about 1,500 ft (457 m) northeast of U.S. Highway 3, north of Holy Cross Convent, and 2.6 mi (4.2 km) south of Franklin.

Owner: Holy Cross Convent.

AQUIFER.--Sand of Pleistocene age.

WELL CHARACTERISTICS.--Unused water-table well, diameter 2.5 in (0.06 m), depth 52.3 ft (15.9 m).

DATUM.--Altitude of land-surface datum is 290 ft (88 m). Measuring point: Top of casing, 1.80 ft (0.55 m) above land-surface datum.

PERIOD OF RECORD.--October 1966 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.98 ft (2.13 m) below land-surface datum, Apr. 24, 1973; lowest measured, 15.75 ft (4.80 m) below land-surface datum, Oct. 27, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1979	12.95	JAN 24, 1980	13.01	APR 25, 1980	12.15	JUL 28, 1980	13.04
NOV 26	13.06	FEB 25	13.97	MAY 27	11.77	AUG 25	13.72
DEC 27	12.73	MAR 25	13.02	JUN 26	12.25	SEP 24	14.47

MERRIMACK COUNTY--Continued

430235071275501. Local number, HTW 5.
LOCATION.--Lat 43°02'35", long 71°27'55", Hydrologic Unit 01070002, within southeastern cloverleaf of intersection of U.S. Highway 3A and Interstate Highway 93, 3.7 mi (6.0 km) south of the center of Hooksett.
Owner: New Hampshire Department of Public Works and Highways.
AQUIFER.--Crystalline rock of Devonian age.
WELL CHARACTERISTICS.--Drilled, unused bedrock well, diameter 6 in (0.15 m), depth 102.73 ft (31.31 m).
DATUM.--Land-surface datum is 258.93 ft (78.922 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.00 ft (0.91 m) above land-surface datum.
PERIOD OF RECORD.--April 1965 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 40.69 ft (12.40 m) below land-surface datum, Apr. 28, 1967; lowest measured, 51.96 ft (15.84 m) below land-surface datum, Feb. 10, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1979	48.22	JAN 24, 1980	47.99	APR 25, 1980	47.01	JUL 28, 1980	49.08
NOV 26	47.64	FEB 25	48.93	MAY 27	47.30	AUG 25	49.66
DEC 26	47.89	MAR 25	48.79	JUN 26	48.27	SEP 24	50.29

432343071570901. Local number, NLW 1.
LOCATION.--Lat 43°23'43", long 71°57'09", Hydrologic Unit 01070003, at north side of Golf Course Road, about 500 ft (150 m) east of intersection of State Highway 114 and Golf Course Road, and 2.1 mi (3.4 km) southeast of New London.
Owner: W. S. Mariner.
AQUIFER.--Sandy till of Pleistocene age.
WELL CHARACTERISTICS.--Dug observation water-table well, diameter 36 in (0.91 m), depth 21 ft (6.4 m), lined with stone to 21 ft (6.4 m), open end.
DATUM.--Altitude of land-surface datum is 1,020 ft (310 m). Measuring point: Top of 2-in (0.05 m) casing, 4.00 ft (1.22 m) above land-surface datum.
PERIOD OF RECORD.--October 1947 to current year. Prior to January 1956, published in Water Levels and Artesian Pressures in Observation Wells in the United States: Part 1. Northeastern States; Geological Survey Water-Supply Paper Series. January 1956 to November 1972, published in Ground-Water Levels in the United States, Northeastern States; Geological Survey Water-Supply Paper Series.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.80 ft (0.24 m) below land-surface datum, Apr. 2, 1963; lowest measured, 16.90 ft (5.15 m) below land-surface datum, Dec. 28, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1979	9.02	JAN 27, 1980	8.35	APR 28, 1980	5.28	JUL 29, 1980	12.43
NOV 24	8.58	FEB 27	10.97	MAY 28	7.78	AUG 27	13.78
DEC 21	7.98	MAR 25	9.35	JUN 27	10.36	SEP 23	14.86

431540071452801. Local number, WCW 1.
LOCATION.--Lat 43°15'40", long 71°45'28", Hydrologic Unit 01070003, 44 ft (13.4 m) northeast of edge of pavement of northbound lane of Interstate Highway 89, about 2 mi (3.2 km) southeast of State Highway 103 overpass in Warner.
Owner: New Hampshire Department of Public Works and Highways.
AQUIFER.--Sand and fine gravel of Pleistocene age.
WELL CHARACTERISTICS.--Driven, unused water-table well, diameter 2 in (0.05 m), depth 42.8 ft (13.05 m).
DATUM.--Altitude of land-surface datum is 424 ft (129 m). Measuring point: Top of casing, 3.2 ft (0.98 m) above land-surface datum.
PERIOD OF RECORD.--December 1965 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 24.94 ft (7.60 m) below land-surface datum, May 5, 1969; lowest measured, 33.82 ft (10.31 m) below land-surface datum, Dec. 17, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1979	30.09	JAN 24, 1980	29.75	APR 25, 1980	29.69	AUG 25, 1980	32.08
NOV 26	30.20	FEB 24	31.01	JUN 26	30.42	SEP 23	32.71
DEC 27	30.41	MAR 25	30.45	JUL 28	31.34		

MERRIMACK COUNTY--Continued

431540071452802. Local number, WCW 2.

LOCATION.--Lat 43°15'40", long 71°45'28", Hydrologic Unit 01070003, 69 ft (21 m) northeast of edge of pavement of northbound lane of Interstate Highway 89, about 2 mi (3.2 km) southeast of State Highway 103 overpass in Warner.

Owner: New Hampshire Department of Public Works and Highways.

AQUIFER.--Sand and fine gravel of Pleistocene age.

WELL CHARACTERISTICS.--Driven, unused water-table well, diameter 2 in (.05 m), depth 43.7 ft (13.32 m).

DATUM.--Altitude of land-surface datum is 424 ft (129 m). Measuring point: Top of casing, 2.3 ft (0.70 m) above land-surface datum.

PERIOD OF RECORD.--December 1965 to June 1968, February 1970 to July 1980 (discontinued).

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 26.24 ft (8.00 m) below land-surface datum, Apr. 26, 1973; lowest measured, 33.90 ft (10.33 m) below land-surface datum, Dec. 15, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1979	30.17	DEC 27, 1979	30.18	FEB 24, 1980	31.56	APR 25, 1980	29.69
NOV 26	30.17	JAN 24 1980	30.48	MAR 25	31.04	JUN 26	30.41

431540071452803. Local number, WCW 3.

LOCATION.--Lat 43°15'40", long 71°45'28", Hydrologic Unit 01070003, 103 ft (31.4 m) northeast of edge of pavement of northbound lane of Interstate Highway 89, about 2 mi (3.2 km) southeast of State Highway 103 overpass in Warner.

Owner: New Hampshire Department of Public Works and Highways.

AQUIFER.--Sand of Pleistocene age.

WELL CHARACTERISTICS.--Bored, unused water-table well, diameter 2 in (0.05 m), depth 60 ft (18.3 m).

DATUM.--Altitude of land-surface datum is 424 ft (129 m). Measuring point: Top of casing, 3.0 ft (0.91 m) above land-surface datum.

PERIOD OF RECORD.--February 1967 to June 1968, February 1970 to July 1980 (discontinued).

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 25.53 ft (7.78 m) below land-surface datum, Apr. 27, 1973; lowest measured, 32.27 ft (9.84 m) below land-surface datum, Feb. 25, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1979	29.70	DEC 27, 1979	29.95	FEB 24, 1980	31.28	APR 25, 1980	29.16
NOV 26	29.68	JAN 24 1980	29.85	MAR 25	31.28	JUN 26	29.88

STRAFFORD COUNTY

430721071005001. Local number, LIW 1.

LOCATION.--Lat 43°07'21", long 71°00'50", Hydrologic Unit 01060003, southwest side of Bennett Road about 200 ft (60 m) from the west corner of the Lee Town Green.

Owner: Mildred Carlson.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 40 in (1.02 m) depth 32.8 ft (10.0 m), lined with stone to 32.8 ft (10.0 m).

DATUM.--Altitude of land-surface datum is 190 ft (58 m). Measuring point: Top of stone cover, at land-surface datum.

PERIOD OF RECORD.--November 1953 to current year. Prior to January 1958, published in New Hampshire Basic-Data Report No. 1, Ground-Water Series. Prior to January 1956, published in Water Levels and Artesian Pressures in Observation Wells in the United States: Part 1. Northeastern States; Geological Survey Water-Supply Paper Series. January 1956 to December 1972, published in Ground-Water Levels in the United States, Northeastern States; Geological Survey Water-Supply Paper Series.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 28.48 ft (8.68 m) below land-surface datum, Mar. 17, 1977; lowest measured, 32.35 ft (9.86 m) below land-surface datum, Nov. 1, 27, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22, 1979	30.98	JAN 28, 1980	31.36	MAR 26, 1980	30.81	JUL 28, 1980	31.59
NOV 24	30.98	FEB 24	31.63	APR 24	30.65	AUG 25	31.60
27	30.99	26	31.59	27	30.73	SEP 24	31.82
DEC 22	31.25	MAR 24	30.80	MAY 22	30.89		

BENNINGTON COUNTY

424810073160401. Local number, POW 1.
LOCATION.--Lat 42°48'10", long 73°16'04", Hydrologic Unit 02020003, in front of residence on west side of State Highway 346 and 0.15 mi (0.24 km) south of post office at North Pownal.
Owner: Robert Rudd, Sr.
AQUIFER.--Sand and gravel of Pleistocene age.
WELL CHARACTERISTICS.--Dug observation water-table well, diameter 24 in (0.61 m), depth 18 ft (5.5 m), cased with stone to 18 ft (5.5 m), open end.
DATUM.--Altitude of land-surface datum is 515 ft (157 m). Measuring point: Top of 0.75-in (0.02 m) diameter hole drilled in center of 0.38-in (0.01 m) thick steel cover at land-surface datum.
PERIOD OF RECORD.--October 1964 to current year. Prior to October 1977, published as Pownal 1.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.28 ft (3.13 m) below land-surface datum, Mar. 26, 1977; lowest measured, 16.59 ft (5.06 m) below land-surface datum, Oct. 19, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24, 1979	13.72	JAN 23, 1980	13.91	APR 21, 1980	12.24	JUL 25, 1980	13.71
NOV 25	13.57	FEB 22	14.07	MAY 23	13.60	AUG 23	14.29
DEC 21	13.73	MAR 22	13.31	JUN 23	13.79	SEP 20	13.97

CHITTENDEN COUNTY

443646073124901. Local number, MJW 3.
LOCATION.--Lat 44°36'46", long 73°12'49", Hydrologic Unit 02010005, about 600 ft (183 m) south of manager's residence at Vermont Sandbar Waterfowl Development Area, about 400 ft (122 m) west of former U.S. Highway 2, and 0.9 mi (1.4 km) northwest of Lamoille River bridge at Milton.
Owner: U.S. Geological Survey.
AQUIFER.--Sand and gravel of Pleistocene age.
WELL CHARACTERISTICS.--Driven observation water-table well, diameter 1.25 in (0.03 m), depth 40 ft (12.2 m), screened 38 to 40 ft (11.6 to 12.2 m).
DATUM.--Altitude of land-surface datum is 160 ft (49 m). Measuring point: Top of casing, 4.00 ft (1.22 m) above land-surface datum.
PERIOD OF RECORD.--November 1956 to current year. Prior to October 1977, published as Milton 3.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 21.97 ft (6.70 m) below land-surface datum, May 29, 1974; lowest measured, 37.82 ft (11.53 m) below land-surface datum, Feb. 26, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24, 1979	33.59	JAN 24, 1980	34.93	APR 24, 1980	32.35	JUL 24, 1980	33.99
NOV 23	34.38	FEB 22	35.22	MAY 26	32.47	AUG 25	34.90
DEC 19	34.68	MAR 24	35.64	JUN 23	33.18	SEP 24	35.75

ESSEX COUNTY

444731071514701. Local number, BIW 1.
LOCATION.--Lat 44°47'31", long 71°51'47", Hydrologic Unit 01110000, south of road and just west of parking lot for Brighton State Park Beach at Brighton.
Owner: U.S. Geological Survey.
AQUIFER.--Medium and coarse sand of Pleistocene age.
WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in (0.03 m), depth 35 ft (10.7 m), screened 33 to 35 ft (10.1 to 10.7 m).
DATUM.--Altitude of land-surface datum is 1,180 ft (360 m). Measuring point: Top of casing, 4.00 ft (1.22 m) above land-surface datum.
PERIOD OF RECORD.--November 1966 to current year. Prior to October 1977, published as Brighton 1.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.94 ft (0.59 m) below land-surface datum, Apr. 25, 1974; lowest measured, 4.94 ft (1.51 m) below land-surface datum, July 27, 1975, June 24, 1977, September 23, 1980.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1979	3.94	JAN 25, 1980	3.97	APR 21, 1980	3.07	JUL 28, 1980	4.72
NOV 28	3.98	FEB 22	4.37	MAY 23	3.81	AUG 21	4.59
DEC 20	3.97	MAR 22	4.07	JUN 22	4.60	SEP 23	4.94

FRANKLIN COUNTY

445603072422901. Local number, BKW 1.
LOCATION.--Lat 44°56'03", long 72°42'29", Hydrologic Unit 02010007, at southeast end of State Highway 118 bridge on Missisquoi River at East Berkshire.
Owner: U.S. Geological Survey.
AQUIFER.--Fine sand and gravel of Pleistocene age.
WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in (0.03 m), depth 51 ft (15.5 m), screened 49 to 51 ft (14.9 to 15.5 m).
DATUM.--Altitude of land-surface datum is 425 ft (130 m). Measuring point: Top of casing, 4.00 ft (1.22 m) above land-surface datum.
PERIOD OF RECORD.--November 1966 to current year. Prior to October 1977, published as Berkshire 1.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.78 ft (2.98 m) below land-surface datum, Apr. 25, 1978; lowest measured, 16.43 ft (5.01 m) below land-surface datum, Aug. 26, 1975.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24, 1979	14.13	JAN 24, 1980	14.18	APR 24, 1980	13.49	JUL 24, 1980	15.52
NOV 23	14.06	FEB 22	14.98	MAY 26	14.82	AUG 25	15.58
DEC 19	13.73	MAR 24	12.18	JUN 23	15.40	SEP 24	14.80

LAMOILLE COUNTY

443405072323501. Local number, MPW 1.
LOCATION.--Lat 44°34'05", long 72°32'35", Hydrologic Unit 02010005, Vermont Highway Department right-of-way off State Highway 15 and 3 mi (5 km) east of Morrisville.
Owner: U.S. Geological Survey.
AQUIFER.--Silty, fine to medium sand of Pleistocene age.
WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in (0.03 m), depth 50 ft (15.2 m), screened 48 to 50 ft (14.6 to 15.2 m).
DATUM.--Altitude of land-surface datum is 660 ft (201 m). Measuring point: Top of casing, 4.00 ft (1.22 m) above land-surface datum.
PERIOD OF RECORD.--October 1966 to current year. Prior to October 1977, published as Morristown 1.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 14.87 ft (4.53 m) below land-surface datum, Jan. 27, 1978; lowest measured, 20.40 ft (6.22 m) below land-surface datum, Nov. 27, 1978.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24, 1979	19.49	JAN 24, 1980	18.74	APR 24, 1980	18.92	JUL 24, 1980	20.11
NOV 23	19.45	FEB 22	19.64	MAY 26	19.43	AUG 25	20.29
DEC 19	19.03	MAR 24	18.97	JUN 23	19.85	SEP 24	19.66

ORANGE COUNTY

435343072151801. Local number, WOW 1.
LOCATION.--Lat 43°53'43", long 72°15'18", Hydrologic Unit 01080103, 60 ft (18 m) west of salt shed and 1.3 mi (2.1 km) south-southeast of West Fairlee Village.
Owner: U.S. Geological Survey.
AQUIFER.--Sand of Pleistocene age.
WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in (0.03 m), depth 54 ft (16.5 m) screened 52 to 54 ft (15.9 to 16.5 m).
DATUM.--Altitude of land-surface datum is 700 ft (213 m). Measuring point: Top of casing, 2.00 ft (0.61 m) above land-surface datum.
PERIOD OF RECORD.--November 1966 to current year. Prior to October 1977, published as West Fairlee 1.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.71 ft (0.22 m) below land-surface datum, Jan. 26, 1978; lowest measured, 5.48 ft (1.67 m) below land-surface datum, Sept. 23, 1980.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1979	4.50	JAN 23, 1980	3.98	APR 24, 1980	2.90	JUL 25, 1980	4.91
NOV 26	4.37	FEB 21	4.95	MAY 26	3.55	AUG 25	5.44
DEC 19	4.28	MAR 25	2.91	JUN 24	4.31	SEP 23	5.48

ORLEANS COUNTY

443952072114001. Local number, GLW 1.

LOCATION.--Lat 44°39'52", long 72°11'40", Hydrologic Unit 01110000, at Vermont Highway Department salt shed west of State Highway 16 and 3 mi (5 km) south of Glover Village.
Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in (0.03 m), depth 82 ft (25 m), screened 80 to 82 ft (24.4 to 25 m).

DATUM.--Altitude of land-surface datum is 1,200 ft (366 m). Measuring point: Top of casing, 4.00 ft (1.22 m) above land-surface datum.

PERIOD OF RECORD.--November 1966 to current year. Prior to October 1977, published as Glover 1.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 12.11 ft (3.69 m) below land-surface datum, May 23, 1969; lowest measured, 18.95 ft (5.78 m) below land-surface datum, Mar. 28, 1967.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24, 1979	17.01	JAN 24, 1980	17.24	APR 24, 1980	16.49	JUL 24, 1980	17.45
NOV 23	17.22	FEB 22	17.43	MAY 26	16.93	AUG 25	17.83
DEC 19	17.31	MAR 24	17.69	JUN 23	17.15	SEP 24	18.12

RUTLAND COUNTY

434217073010601. Local number, PFW 8.

LOCATION.--Lat 43°42'17", long 73°01'06", Hydrologic Unit 02010002, 12 ft (4 m) west of storage building at St. Alphonsus Cemetery at Pittsford.
Owner: U.S. Geological Survey.

AQUIFER.--Medium to fine sand of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in (0.03 m), depth 42 ft (12.8 m), screened 40 to 42 ft (12.2 to 12.8 m).

DATUM.--Altitude of land-surface datum is 490 ft (149 m). Measuring point: Top of casing, 2.00 ft (0.61 m) above land-surface datum.

REMARKS.--Well pulled Nov. 8, 1968, point replaced, depth changed from 43 ft (13.1 m) to 42 ft (12.8 m), old 3-ft (0.9 m) point was completely encrusted.

PERIOD OF RECORD.--October 1957 to current year. Prior to October 1977, published as Pittsford 8.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 34.17 ft (10.42 m) below land-surface datum, May 26, 1976; lowest measured, 39.59 ft (12.07 m) below land-surface datum, Oct. 18, 1957.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1979	36.04	JAN 23, 1980	36.01	APR 24, 1980	36.19	JUL 25, 1980	36.64
NOV 26	35.99	FEB 21	36.16	MAY 26	36.39	AUG 25	36.95
DEC 19	36.13	MAR 25	36.10	JUN 24	36.59	SEP 23	37.01

WASHINGTON COUNTY

441829072413901. Local number, MHW 3.

LOCATION.--Lat 44°18'29", long 72°41'39", Hydrologic Unit 02010003, adjacent to salt shed at Vermont Highway Department garage off U.S. Highway 2 and 1.25 mi (2.01 km) west of Middlesex Village.
Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in (0.03 m), depth 50 ft (15.2 m), screened 48 to 50 ft (14.6 to 15.2 m).

DATUM.--Land-surface datum is 453.72 ft (138.294 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.00 ft (0.91 m) above land-surface datum.

PERIOD OF RECORD.--October 1966 to current year. Prior to October 1977, published as Middlesex 3.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 15.99 ft (4.87 m) below land-surface datum, Feb. 24, 1976; lowest measured, 23.74 ft (7.24 m) below land-surface datum, Sept. 25, 1978.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24, 1979	22.19	JAN 24, 1980	22.07	APR 24, 1980	21.44	JUL 24, 1980	22.69
NOV 26	22.18	FEB 21	21.78	MAY 26	22.48	AUG 25	23.67
DEC 21	22.02	MAR 24	20.25	JUN 23	22.88	SEP 24	22.25

WASHINGTON COUNTY--Continued

441552072341901. Local number, MMW 2.
LOCATION.--Lat 44°15'52", long 72°34'19", Hydrologic Unit 02010003, at southeast corner of garage at Nine Winter Street in Montpelier.
Owner: U.S. Geological Survey.
AQUIFER.--Medium to coarse sand of Pleistocene age.
WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in (0.03 m), depth 26 ft (7.9 m), screened 24 to 26 ft (7.3 to 7.9 m).
DATUM.--Altitude of land-surface datum is 520 ft (158 m). Measuring point: Top of casing, 0.10 ft (0.03 m) above land-surface datum.
PERIOD OF RECORD.--October 1966 to current year. Prior to October 1977, published as Montpelier 2.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11.09 ft (3.38 m) below land-surface datum, Apr. 24, 1969; lowest measured, 16.84 ft (5.13 m) below land-surface datum, Sept. 25, 1978.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1979	15.37	JAN 24, 1980	15.89	APR 24, 1980	14.40	JUL 23, 1980	16.60
NOV 27	15.29	FEB 22	16.67	MAY 26	15.14	AUG 25	16.62
DEC 19	15.38	MAR 24	15.37	JUN 23	16.02	SEP 24	16.10

441215072483101. Local number, WAW 2.
LOCATION.--Lat 44°12'15", long 72°48'31", Hydrologic Unit 02010003, at rest area on east side of State Highway 100 and 1.3 mi (2.1 km) northeast of Waitsfield Village.
Owner: U.S. Geological Survey.
AQUIFER.--Silty gravel of Pleistocene age.
WELL CHARACTERISTICS.--Drive and wash observation water-level well, diameter 1.25 in (0.03 m), depth 45.5 ft (13.9 m), screened 43.5 to 45.5 ft (13.3 to 13.9 m).
DATUM.--Altitude of land-surface datum is 685 ft (209 m). Measuring point: Top of casing, 2.00 ft (0.61 m) above land-surface datum.
PERIOD OF RECORD.--June 1975 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.69 ft (1.43 m) below land-surface datum, Apr. 25, 1977; lowest measured, 7.62 ft (2.32 m) below land-surface datum, July 26, 1979.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1979	6.61	JAN 24, 1980	6.89	APR 24, 1980	6.40	JUL 25, 1980	7.17
NOV 26	6.56	FEB 21	7.05	MAY 26	6.91	AUG 25	7.59
DEC 19	6.77	MAR 25	6.53	JUN 24	7.19	SEP 23	7.38

441033072500201. Local number, WAW 3.
LOCATION.--Lat 44°10'33", long 72°50'02", Hydrologic Unit 02010003, town of Waitsfield, northwest of Vermont Highway Department salt shed on State Highway 100 and 0.5 mi (0.8 km) southeast of Irasville Village.
Owner: U.S. Geological Survey.
AQUIFER.--Sand and gravel of Pleistocene age.
WELL CHARACTERISTICS.--Drive and wash observation water-level well, diameter 1.25 in (0.03 m), depth 53 ft (16.2 m), screened 51 to 53 ft (15.5 to 16.2 m).
DATUM.--Altitude of land-surface datum is 715 ft (218 m). Measuring point: Top of casing, 3.25 ft (0.99 m) above land-surface datum.
PERIOD OF RECORD.--June 1975 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.34 ft (0.71 m) below land-surface datum, Feb. 24, 1976; lowest measured, 8.00 ft (2.44 m) below land-surface datum, Sept. 25, 1978.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1979	6.39	JAN 24, 1980	6.86	APR 24, 1980	6.23	JUL 25, 1980	7.36
NOV 26	6.61	FEB 21	7.35	MAY 26	6.85	AUG 25	7.75
DEC 19	6.86	MAR 25	6.64	JUN 24	7.22	SEP 23	7.58

WINDSOR COUNTY

431551072350601. Local number, CKW 1.
LOCATION.--Lat 43°15'51", long 72°35'06", Hydrologic Unit 01080107, at Vermont Highway Department salt shed on Elm Street in Chester.
Owner: U.S. Geological Survey.
AQUIFER.--Boulders, coarse gravel of Pleistocene age.
WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in (0.03 m), depth 22 ft (6.7 m), screened 20 to 22 ft (6.1 to 6.7 m).
DATUM.--Altitude of land-surface datum is 580 ft (177 m). Measuring point: Top of casing, 2.00 ft (0.61 m) above land-surface datum.
PERIOD OF RECORD.--November 1966 to current year. Prior to October 1977, published as Chester 1.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.81 ft (0.55 m) below land-surface datum, Mar. 28, 1978; lowest measured, 6.31 ft (1.92 m) below land-surface datum, Sept. 28, 1967.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1979	5.17	JAN 23, 1980	5.42	APR 24, 1980	4.12	JUL 25, 1980	5.98
NOV 26	5.23	FEB 21	5.64	MAY 26	5.36	AUG 25	6.13
DEC 19	5.24	MAR 25	3.94	JUN 24	5.69	SEP 23	6.01

433240072242901. Local number, HLW 54.
LOCATION.--Lat 43°32'40", long 72°24'29", Hydrologic Unit 01080104, at northeast corner of fire station in Hartland.
Owner: U.S. Geological Survey.
AQUIFER.--Sand and gravel of Pleistocene age.
WELL CHARACTERISTICS.--Augered observation water-level well, diameter 1.25 in (0.03 m), depth 51 ft (15.54 m), screened 49 to 51 ft (14.93 to 15.54 m).
DATUM.--Altitude of land-surface datum is 575 ft (175 m). Measuring point: Top of casing, 4.00 ft (1.22 m) above land-surface datum.
PERIOD OF RECORD.--August 1969 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.65 ft (2.03 m) below land-surface datum, July 26, 1973; lowest measured, 9.94 ft (3.03 m) below land-surface datum, Oct. 22, 1971.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1979	9.49	JAN 23, 1980	8.97	APR 24, 1980	8.69	JUL 25, 1980	9.57
NOV 26	9.47	FEB 21	9.24	MAY 26	9.01	AUG 25	9.81
DEC 19	9.37	MAR 25	8.93	JUN 24	9.27	SEP 23	9.89

435129072483301. Local number, RJW 1.
LOCATION.--Lat 43°51'29", long 72°48'33", Hydrologic Unit 01080105, adjacent to salt shed at Vermont Highway Department garage 1.3 mi (2.1 km) south of Rochester Village.
Owner: U.S. Geological Survey.
AQUIFER.--Sand of Pleistocene age.
WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in (0.03 m), depth 73 ft (22.3 m), screened 71 to 73 ft (21.6 to 22.3 m).
DATUM.--Altitude of land-surface datum is 800 ft (244 m). Measuring point: Top of casing, 4.00 ft (1.22 m) abcve land-surface datum.
PERIOD OF RECORD.--October 1966 to current year. Prior to 1977, published as Rochester 1.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.50 ft (1.37 m) below land-surface datum, Mar. 26, 1968; lowest measured, 13.05 ft (3.98 m) below land-surface datum, Aug. 25, 1975.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1979	11.16	JAN 23, 1980	10.54	APR 24, 1980	9.01	JUL 25, 1980	12.40
NOV 26	11.18	FEB 21	12.15	MAY 26	10.19	AUG 25	12.75
DEC 19	11.31	MAR 25	8.82	JUN 24	11.93	SEP 23	12.55

INDEX

Page
Accuracy of field data and computed results...... 12
Algae, definition of.............................. 3
Ammonoosuc River, at Bethlehem Junction, NH......65,155
  near Bath, NH....................................66,155
Androscoggin River, at Errol, NH.................16,150
  near Gorham, NH..................................17,150
Androscoggin River basin,
  gaging-station records in...................... 15-17
  lakes in, capacity of.......................... 16-17
Aquifer, definition of............................ 5
Arlington, VT, Batten Kill at....................110,158
Artesian, definition of........................... 5
Ash mass, definition of........................... 5
Ashland, NH, Squam River at......................28,152
Ashuelot River, at Hinsdale, NH..................108,158
  below Surry Mountain Dam, near Keene, NH......106,157
  near Gilsum, NH..................................105,157
Ayers Brook at Randolph, VT......................81,156

Bacteria, definition of........................... 5
Baker River near Rumney, NH......................149,151
Ball Mountain Reservoir, VT, contents of......... 109
Bath, NH, Ammonoosuc River near..................66,155
Batten Kill at Arlington, VT.....................110,158
Bed material, definition of....................... 5
Bennington County, ground-water levels........... 170
Bethlehem Junction, NH, Ammonoosuc River at......65,155
Big Brook near Pittsburg, NH.....................55,154
Biochemical oxygen demand, definition of......... 5
Biomass, definition of............................ 5
Biomass pigment ratio, definition of............. 5
Black River (Connecticut River basin), at Covered Bridge, at Weathersfield, VT.......87,156
  at North Springfield, VT.........................88,157
Black River (St. Lawrence River basin) at Coventry, VT.............................137-146
Blackwater Reservoir, NH, contents of............ 54
Blackwater River near Webster, NH................37,153
Bottom material, definition of.................... 5
Bradford, NH, West Branch Warner River near......36,153
Bristol, NH, Smith River near....................29,152
Brockways Mills, VT, Williams River at...........89,157
Burlington, VT, Lake Champlain at................ 128

Cells/volume, definition of....................... 6
Center Rutland, VT, Otter Creek at...............113,158
Cfs-day, definition of............................ 6
Chemical oxygen demand, definition of............ 6
Cheshire County, ground-water levels in.......... 162
Chittenden County, ground-water levels in........ 170
Chlorophyll, definition of........................ 6
Clyde River at Newport, VT.......................147,160
Collection and computation of
  water-discharge data........................... 11-13
  ground-water data.............................. 13
  surface-water data............................. 11-12
  water-quality data............................. 13
Color, definition of.............................. 6
Comerford Reservoir, NH, contents of............. 109
Concord, NH, Merrimack River at..................38-45,149
  Soucook River near...............................46,153
Connecticut River, at First Connecticut Lake, near Pittsburg, NH...................56,154
  at North Stratford, NH...........................59,154
  at North Walpole, NH............................ 91
  at Walpole, NH...................................92-102
  at Wells River, VT.............................. 67-76
  at West Lebanon, NH..............................83,156
  below Indian Stream, near Pittsburg, NH.........57,154
  near Dalton, NH..................................61,154
  discharge measurements at miscellaneous sites in....................................... 149
  gaging-station records in........................55-109
  miscellaneous temperature and specific conductance measurements in...............150-160
  reservoirs in.................................. 109
Contents, definition of........................... 6
Contoocook River, at Penacook, NH................ 149
  at Peterborough, NH..............................148,149
  below Hopkinton Dam, at West Hopkinton, NH.....35,152
  near Henniker, NH................................148,149
Control, definition of............................ 6

Conway, NH, Saco River near......................20,150
Cooperation....................................... 1
Coos County, ground-water levels in.............. 162
Coventry, VT, Black River at.....................137-146
Crystal Lake, NH, capacity of.................... 109
Cubic feet per second per square mile, definition of.............................. 6
Cubic foot per second, definition of............. 6

Dalton, NH, Connecticut River near...............61,154
Data, accuracy of................................. 12
  other available................................ 13
  ground-water, collection of.................... 13
  surface-water, collection and computation of... 11-12
  water-quality, collection and examination of.............. 13
Definition of terms............................... 3
Diamond River near Wentworth Location, NH........15,150
Discharge, definition of.......................... 6
Dissolved, definition of.......................... 6
Diversity index, definition of.................... 6
Dog River at Northfield Falls, VT................119,159
Downstream order and station number, explanation of............................. 10
Drainage area, definition of...................... 6
Drainage basin, definition of..................... 6
Dry mass, definition of........................... 5
Dudley Brook near Exeter, NH.....................25,151
Durham, NH, Oyster River near....................23,151

East Barre Detention Reservoir, VT, contents of................................ 117
East Barre, VT, Jail Branch at...................115,159
East Berkshire, VT, Missisquoi River near........127,160
East Georgia, VT, Lamoille River at..............125,160
East Hereford, Quebec, Halls Stream near.........58,154
East Orange Branch at East Orange, VT............78,155
East Weare, NH, Piscataquog River near...........47,153
Effingham Falls, NH, Ossipee River at............21,151
Ellis River, near Jackson, NH....................18,150
Errol, NH, Androscoggin River at.................16,150
Essex County, ground-water levels in............. 170
Essex Junction, VT, Winooski River near..........123,160
Etna, NH, Mink Brook near........................80,155
Everett Lake, NH, contents of.................... 54
Exeter, NH, Dudley Brook near....................25,151

Fair Haven, VT, Poultney River below.............112,158
Fecal coliform bacteria, definition of........... 5
Fecal streptococcal bacteria, definition of...... 5
First Connecticut Lake, NH, contents of.......... 109
Franklin County, ground-water levels in.......... 171
Franklin Falls Reservoir, NH, contents of........ 54
Franklin Junction, NH, Merrimack River at........ 149

Gage height, definition of........................ 6
Gaging station, definition of..................... 6
Gilford, NH, Poor Farm Brook near................30,152
Gilsum, NH, Ashuelot River near..................105,157
Goffstown, NH, Piscataquog River near............ 149
Goose Pond, NH, capacity of...................... 109
Gorham, NH, Androscoggin River near..............17,150
Grafton Pond, NH, capacity of.................... 109
Ground-water levels in New Hampshire.............162-169
  in Vermont.......................................170-174
Ground-water-level records, explanation of....... 13
Groveton, NH, Upper Ammonoosuc River near........60,154

Halls Stream near East Hereford, Quebec..........58,154
Hardness, definition of........................... 6
Henniker, NH, Contoocook River near..............148,149
Hillsborough County, ground-water levels in.....................163-166
Hinsdale, NH, Ashuelot River at..................108,158
Hopkinton Lake, NH, contents of.................. 54
Hudson River basin, gaging-station records in.................110-111
  miscellaneous temperature and specific conductance measurements in................ 150
Hydrologic conditions............................. 3
  graph of....................................... 4
Hydrologic unit, definition of.................... 7

Page
Instantaneous discharge, definition of........... 6
Introduction..................................... 1

Jackson, NH, Ellis River near....................18,150
Jail Branch at East Barre, VT...................115,159
Jamaica, VT, West River at......................103,157
Johnson, VT, Lamoille River at..................124,160

Keene, NH, Ashuelot River near..................106,157
  Otter Brook near..............................107,157

Lake Champlain, at Burlington, VT................ 128
Lake Francis, NH, contents of.................... 109
Lake Memphremagog at Newport, VT................. 136
Lake Winnipesaukee at Weirs Beach, NH............ 31
Lake Winnipesaukee Outlet at Lakeport, NH........32,152
Lakes and reservoirs:
  Ball Mountain Reservoir, VT.................... 109
  Blackwater Reservoir, NH....................... 54
  Champlain, Lake, NY-VT........................128-135
  Comerford Reservoir, NH........................ 109
  Crystal Lake, NH............................... 109
  East Barre Detention Reservoir, VT............. 117
  Everett Lake, NH............................... 54
  First Connecticut Lake, NH..................... 109
  Francis, Lake, NH.............................. 109
  Franklin Falls Reservoir, NH................... 54
  Goose Pond, NH................................. 109
  Grafton Pond, NH............................... 109
  Hopkinton Lake, NH............................. 54
  MacDowell Reservoir, NH........................ 54
  Mascoma Lake, NH............................... 109
  Memphremagog, Lake, at Newport, VT............. 136
  Mollys Falls Reservoir, VT..................... 118
  Moore Reservoir, NH............................ 109
  Newfound Lake, NH.............................. 54
  North Hartland Reservoir, VT................... 109
  North Springfield Reservoir, VT................ 109
  Otter Brook Lake, NH........................... 109
  Peacham Pond, VT............................... 118
  Second Connecticut Lake, NH.................... 109
  Sunapee Lake, NH............................... 109
  Surry Mountain Lake, NH........................ 109
  Townshend Reservoir, VT........................ 109
  Union Village Reservoir, VT.................... 109
  Waterbury Reservoir near Waterbury, VT......... 121
  Winnipesaukee, Lake, at Weirs Beach, NH........ 31
  Wrightsville Detention Reservoir, VT........... 117
Lakeport, NH,
  Lake Winnipesaukee Outlet at...................32,152
Lamoille County, ground-water levels in.......... 171
Lamoille River, at East Georgia, VT.............125,160
  at Johnson, VT................................124,160
Lamprey River basin, capacity of ponds in........ 24
Lamprey River, near Newmarket, NH................24,151
Land-surface datum, definition of................ 7
Little River near Waterbury, VT.................122,159
Lucy Brook near North Conway, NH.................19,150

MacDowell Reservoir, NH, contents of............. 54
Mad River near Moretown, VT.....................120,159
Marchester, NH, Merrimack River below............48,153
Mascoma Lake, NH, capacity of.................... 109
Mascoma River, at Mascoma, NH....................84,156
  at West Canaan, NH............................148,156
Mascoma River basin, lakes and ponds in,
    contents of.................................. 109
Mean concentration (sediment) definition of...... 8
Mean discharge, definition of.................... 6
Measuring point, definition of................... 7
Merrimack, NH, Souhegan River at............148,149,153
Merrimack County, ground-water levels in........166-169
Merrimack River, at Concord, NH...............38-45,149
  at Franklin Junction, NH....................... 149
  at Nashua, NH.................................. 50-53
  near Goffs Falls, below Manchester, NH.........48,153
Merrimack River basin, crest-stage
    partial-record stations in................... 148
  discharge measurements at miscellaneous
    sites in..................................... 149
  gaging-station records in...................... 26-54
  miscellaneous temperature and specific
    conductance measurements in.................151-153
  reservoirs in.................................. 54
Methylene blue active substance, definition of... 7
Micrograms per gram, definition of............... 7
Micrograms per liter, definition of.............. 7
Middlebury, VT, Otter Creek at..................114,158
Milligrams per liter, definition of.............. 7
Milton, NH, Salmon Falls River at................22,151

Page
Mink Brook near Etna, NH.........................80,155
Missisquoi River, near East Berkshire, VT.......127,160
  near North Troy, VT...........................126,160
Mollys Falls Reservoir and Peacham Pond, VT,
    contents of.................................. 118
Montpelier, VT, reservoirs in Winooski River
    basin above.................................. 117
  Winooski River at.............................118,159
Moore Reservoir, NH.............................. 109
Moose River, at St. Johnsbury, VT................63,155
  at Victory, VT.................................62,154
Moretown, VT, Mad River near....................120,159

Nashua, NH, Merrimack River at................... 52-53
  Nashua River at................................ 50-51
National Geodetic Vertical Datum
    of 1929 (NGVD) definition of................. 7
National stream-quality accounting
    network station.....................38,92,129,138
  description of................................. 10
Natural substrates, definition of................ 8
Networks, special................................ 10
Newfane, VT, West River at......................104,157
Newfound Lake, NH, contents of................... 54
Newmarket, NH, Lamprey River near................24,151
Newport, VT, Clyde River at.....................147,160
  Lake Memphremagog at........................... 136
North Bennington, VT, Walloomsac River near.....111,158
North Conway, NH, Lucy Brook near................19,150
North Hartland Reservoir, VT, contents of........ 109
North Hartland, VT, Ottauquechee River at........85,156
North Springfield, VT, Black River at............88,157
North Springfield Reservoir, VT,
    contents of.................................. 109
North Stratford, NH, Connecticut River at........59,154
North Troy, VT, Missisquoi River near...........126,160
North Walpole, NH, Connecticut River at.......... 91
Northfield Falls, VT, Dog River at..............119,159
Nubanusit Brook near Peterborough, NH............34,152
Numbering system for wells and miscellaneous
    sites, description of........................ 10

Ompompanoosuc River, at Thetford Center, VT...... 149
  at Union Village, VT...........................79,155
  West Branch, near South Strafford, VT.......... 149
Orange County, ground-water levels in............ 171
Order of listing stations........................ 10
Organism count/area, definition of............... 7
Organism count/volume, definition of............. 7
Orleans County, ground-water levels in........... 172
Ossipee River at Effingham Falls, NH.............21,151
Ossipee River basin, capacity of lakes
    and ponds in................................. 21
Other data available............................. 13
Ottauquechee River at North Hartland, VT.........85,156
Otter Brook below Otter Brook Dam,
    near Keene, NH..............................107,157
Otter Brook Lake, NH, contents of................ 109
Otter Creek, at Center Rutland, VT..............113,158
  at Middlebury, VT.............................114,158
Oyster River near Durham, NH.....................23,151

Partial-record station, definition of............ 7
Particle-size, definition of..................... 7
Particle-size classification, definition of...... 7
Passumpsic River, at Passumpsic, VT..............64,155
Peacham Pond and Mollys Falls Reservoir, VT,
    contents of.................................. 118
Pemigewasset River, at Plymouth, NH..............27,152
  at Woodstock, NH..........................148,149,151
Penacook, NH, Contoocook River at................ 149
Periphyton, definition of........................ 7
Pesticides, definition of........................ 7
  program, description of........................ 10
Peterborough, NH, Contoocook River at...........148,149
  Nubanusit Brook near...........................34,152
pH, definition of................................ 7
Phytoplankton, definition of..................... 8
Picocurie, definition of......................... 8
Piscataqua River basin,
  gaging station records in...................... 22-25
  miscellaneous temperature and specific
    conductance measurements in.................. 151
Piscataquog River, below Everett Dam,
    near East Weare, NH..........................47,153
  near Goffstown, NH............................. 149
Pittsburg, NH, Big Brook near....................55,154
  Connecticut River at
    First Connecticut Lake near..................56,154
  Connecticut River below Indian Stream near.....57,154

Page
Plymouth, NH, Pemigewasset River at.............27,152
Polychlorinated biphenyls, definition of......... 8
Poor Farm Brook near Gilford, NH.................30,152
Poultney River, below Fair Haven, VT............112,158
Programs, Special................................ 10
Publications on techniques of water-resources investigations............. 14

Radiochemical program, description of............ 10
Randolph, VT, Ayers Brook at.....................81,156
Recoverable from bottom material, definition of 5
Reservoirs (see Lakes and reservoirs).
Richelieu River (Lake Champlain) at Rouses Point, NY.........................129-135
Rouses Point, NY, Richelieu River at............129-135
Rumney, NH, Baker River near....................148,151
Runoff in inches, definition of.................. 8
Rutland County, ground-water levels in........... 172

Saco River basin,
 gaging-station records in.................. 18-21
 miscellaneous temperature and specific conductance measurements in................ 150
Saco River, near Conway, NH......................20,150
St. Johnsbury, VT, Moose River at................63,155
St. Lawrence River basin,
 gaging-station records in.................112-147
 miscellaneous temperature and specific conductance measurements in...............150-160
Salmon Falls River at Milton, NH.................22,151
Salmon Falls River basin,
 contents of lakes and ponds in............. 22
Saxtons River at Saxtons River, VT...............90,157
Second Connecticut Lake, NH, contents of......... 109
Sediment, explanation of......................... 13
 definition of................................. 8
Smith River near Bristol, NH.....................29,152
Soucook River near Concord, NH...................46,153
Souhegan River at Merrimack, NH.............148,149,153
South Strafford, VT, West Branch Ompompanoosuc River near................... 149
Special networks and programs.................... 10
Specific conductance, definition of.............. 8
Squam River at Ashland, NH.......................28,152
Stage and water-discharge records, explanation of............................ 11-12
Stage-discharge relation, definition of.......... 8
Station number................................... 10
Stevens Brook near Wentworth, NH.................26,151
Stony Brook tributary (Merrimack River basin) near Temple, NH............................49,153
Strafford County, ground-water levels in......... 169
Streamflow, definition of........................ 8
Streptococcal bacteria, definition of............ 5
Substrate, definition of......................... 8
Sugar River, at West Claremont, NH...............86,156
Sunapee Lake, NH, contents of.................... 109
Surry Mountain Lake, NH, contents of............. 109
Suspended, definition of......................... 9
Suspended recoverable, definition of............. 9
Suspended sediment, definition of................ 8
Suspended-sediment concentration, definition of.............................. 8
Suspended-sediment discharge, definition of.............................. 8
Suspended-sediment load, definition of........... 8
Suspended, total, definition of.................. 9

Page
Taxonomy, definition of.......................... 9
Temperature, water, explanation of............... 13
Temple, NH, Stony Brook tributary near...........49,153
Terms, definition of............................. 3
Thetford Center, VT, Ompompanoosuc River at...... 149
Tilton, NH, Winnipesaukee River at...............33,152
Time-weighted average, definition of............. 9
Tons per day, definition of...................... 9
Total, definition of............................. 9
Total (as used in tables of chemical analyses)...................... 9
Total coliform bacteria, definition of.............................. 5
Total in bottom material, definition of.............................. 5
Total, recoverable, definition of................ 9
Total sediment discharge, definition of.............................. 8
Townshend Reservoir, VT, contents of............. 109

Union Village Reservoir, VT, contents of......... 109
Union Village, VT, Ompompanoosuc River at........79,155
Upper Ammonoosuc River, near Groveton, NH........60,154

Victory, VT, Moose River at......................62,154

Walpole, NH, Connecticut River at................92-102
Walloomsac River near North Bennington, VT......111,158
Warner River, at West Branch, near Bradford, NH..36,153
Washington County, ground-water levels in.......172-173
Water analysis, explanation of................... 13
Water-quality records, explanation of............ 13
Water temperature, explanation of................ 13
Waterbury Reservoir near Waterbury, VT........... 121
Waterbury, VT, Little River near................122,159
 Waterbury Reservoir near...................... 121
WDR, definition of............................... 9
Weathersfield, VT, Black River at................87,156
Webster, NH, Blackwater River near...............37,153
Weirs Beach, NH, Lake Winnipesaukee at........... 31
Well number...................................... 10
Wells River at Wells River, VT................... 77
Wells River, VT, Connecticut River at............ 67-76
 Wells River at................................77,155
Wentworth Location, NH, Diamond River near.......15,150
Wentworth, NH, Stevens Brook near................26,151
West Canaan, NH, Mascoma River at................ 149
West Claremont, NH, Sugar River at...............86,156
West Hartford, VT, White River at................82,156
West Hopkinton, NH, Contoocook River at..........35,152
West Lebanon, NH, Connecticut River at...........83,156
West River, at Jamaica, VT......................103,157
 at Newfane, VT................................104,157
White River at West Hartford, VT.................82,156
Williams River, at Brockways Mills, VT...........89,157
Windsor County, ground-water levels in........... 174
Winnipesaukee River at Tilton, NH................33,152
Winooski River, at Montpelier, VT...............118,159
 near Essex Junction, VT.......................123,160
 North Branch, at Wrightsville, VT.............116,159
Winooski River basin, VT, reservoirs in.........117,118
Woodstock, NH, Pemigewasset River at........148,149,151
Wrightsville Detention Reservoir, VT, contents of.............................. 117
Wrightsville, VT, North Branch Winooski River at.........................116,159
WSP, definition of............................... 9

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FACTORS FOR CONVERTING INCH-POUND UNITS TO INTERNATIONAL SYSTEM UNITS (SI)

The following factors may be used to convert the inch-pound units published herein to the International System of Units (SI). This report contains both the inch-pound and SI unit equivalents in the station manuscript descriptions.

Multiply inch-pound units	By	To obtain SI units
	Length	
inches (in)	2.54×10^{1}	millimeters (mm)
	2.54×10^{-2}	meters (m)
feet (ft)	3.048×10^{-1}	meters (m)
miles (mi)	1.609×10^{0}	kilometers (km)
	Area	
acres	4.047×10^{3}	square meters (m^2)
	4.047×10^{-1}	square hectometers (hm^2)
	4.047×10^{-3}	square kilometers (km^2)
square miles (mi^2)	2.590×10^{0}	square kilometers (km^2)
	Volume	
gallons (gal)	3.785×10^{0}	liters (L)
	3.785×10^{0}	cubic decimeters (dm^3)
	3.785×10^{-3}	cubic meters (m^3)
million gallons	3.785×10^{3}	cubic meters (m^3)
	3.785×10^{-3}	cubic hectometers (hm^3)
cubic feet (ft^3)	2.832×10^{1}	cubic decimeters (dm^3)
	2.832×10^{-2}	cubic meters (m^3)
cfs-days	2.447×10^{3}	cubic meters (m^3)
	2.447×10^{-3}	cubic hectometers (hm^3)
acre-feet (acre-ft)	1.233×10^{3}	cubic meters (m^3)
	1.233×10^{-3}	cubic hectometers (hm^3)
	1.233×10^{-6}	cubic kilometers (km^3)
	Flow	
cubic feet per second (ft^3/s)	2.832×10^{1}	liters per second (L/s)
	2.832×10^{1}	cubic decimeters per second (dm^3/s)
	2.832×10^{-2}	cubic meters per second (m^3/s)
gallons per minute (gal/min)	6.309×10^{-2}	liters per second (L/s)
	6.309×10^{-2}	cubic decimeters per second (dm^3/s)
	6.309×10^{-5}	cubic meters per second (m^3/s)
million gallons per day	4.381×10^{1}	cubic decimeters per second (dm^3/s)
	4.381×10^{-2}	cubic meters per second (m^3/s)
	Mass	
tons (short)	9.072×10^{-1}	megagrams (Mg) or metric tons